

THE MAGAZINE FOR CLASSROOM USE

Computer Directory For Schools

A buyer's guide to the selection of microcomputers and peripherals, courseware, computer-assisted and computer-managed instruction systems, books and resources, magazines and journals and free materials

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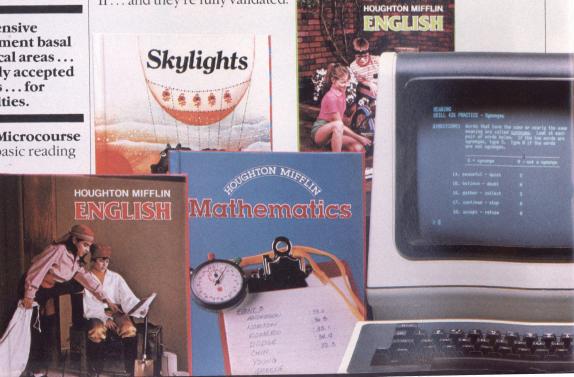
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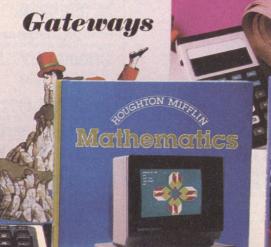
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- ☐ Dolphin™ Curricula
- ☐ The Classroom Answer™
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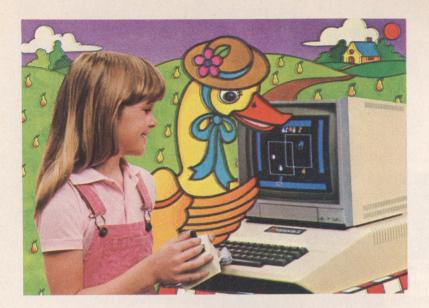
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NOW THE COMPUTER AGE IS THREE TO THIRTEEN.



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So if you've got kids aged three to thirteen, take them to your local Apple dealer and try our learning games

Then you'll see how exciting learning really can be.

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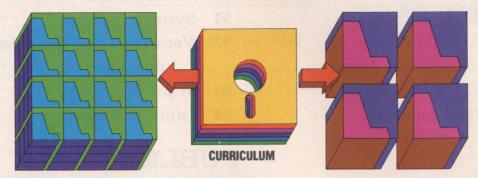
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- Individualized printed WORKSHEETS in math and reading generated for classroom and home use
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- 64K program RAM, 38K display RAM, and 32K ROM for utility programs and integral BASIC
- 16 COLORS, high-resolution GRAPHICS
 COMPUTER LITERACY and PROGRAMMING
- with BASIC, COBOL, UCSD PASCAL and a CAI AUTHORING LANGUAGE
 CP/M* operating system supports
- ATTENDANCE, SCHEDULING, WORD
 PROCESSING and other programs

CP/M 2.2 REGISTERED TRADEMARK OF DIGITAL RESEARCH, INC.



ONE CHILD, One insight. The atomic units of education. That's what it all comes down to.

It's easy to get lost in the abstractions of education—theories, methods, budgets. But one element is irreducible—the smile when a child finally understands. The pleasure of Aha!

Many educators are discovering that classroom computers are powerful Aha! machines—or can be when properly used.

Watch students' faces as they work at their computers. Raul and John argue over how to fix a bug in their program. Melissa types furiously. Janie is engrossed. She beams! Aha! Her answer is correct. Raul and John shout for joy. Aha! Their program finally runs. Melissa runs to the teacher. Aha! Her poem appears on the screen.

Many teachers have said that the classroom computer has renewed their zest for teaching. It eliminates some of the drudgery of classroom management; its instructional possibilities are endless. That is important in itself.

Some educators ask, "Is this microcomputer thing just a flash in the pan?" Maybe. It's true that only continual innovation-creativity-can keep Aha!s resounding. But it's also true that microcomputers are incredibly versatile tools for learning. Present applications in the classroom have barely scratched the surface. The role of these powerful machines in the classroom of the future, then, is up to us and depends on how we choose to use them. Choosing wisely requires being knowledgeable. And many educators are making every effort to learn as much as they can about this relatively new technology and its potential. The 1982-83 Instructor Computer Directory for Schools is designed to help you.

The first microcomputers entered the market a short seven years ago. They were cranky technical toys produced by avid tinkerers and hobbyists. They did not go unnoticed by the forward-thinking educators who had worked with time-sharing computers through the previous 15 years and were beginning to lose hope that the costs of educational computing would descend from the stratosphere. Within two years microcomputers suitable for the school environment appeared and within four a limited but promising number of educational software programs entered the market.

By 1979 the word "microcomputer" was a password to an elite underground of educators—but you had to travel far to find one in a classroom. Today one school in five (if not one in four) is using microcomputers for instruction. More than 50 percent of all school districts in the country have adopted microcomputers, and the volume of sales of computer hardware and software to schools is growing at more than 30 percent a year.

The 1982-83 INSTRUCTOR Computer Directory for Schools brings together in one volume the most complete and up-to-date listing of educational computing products ever—hardware, software, accessories, publications. It contains nearly 2,000 product and 400 company listings—complete with descriptions, equipment requirements, grade and subject codings, prices, addresses, and telephone numbers. It is the definitive source of information on what's currently available where.

The Directory will be expanded and updated annually. It is now and will continue to be the authoritative guide to the educational computing marketplace—the first place to look for products and product information before you go for a demonstration or write a purchase order.

The Directory editors have tried to be encyclopedic rather than selective. And they tried to obtain a complete description of every product offered. The fact that a

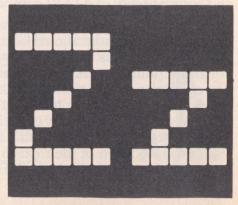
company or product is listed in the Directory does not constitute an endorsement.

Of course every attempt has been made to keep errors out of the Directory. But errors in the first edition of a directory of this magnitude are inevitable. If you find errors, let us know about them so we can correct them next year.

How do you use the 1982-83 INSTRUCTOR Computer Directory for Schools? It is organized into five sections-Hardware and Peripherals, Software, Publications, Companies, and Distributors. Suppose you're interested in software for a science class. The Table of Contents will tell you where to find science software. Search the listings until you find an item of interest. The listing will include the name of the producer. Turn to the Company section to obtain the producer's address and phone number. You may also wish to flip to the Distributor section to see if your favorite software distributor carries that producer's products.

Educational computing is still in its salad days. It is a young, fast-growing, innovative industry learning to work with educators and to serve their needs.

Some products in this Directory will be obsolete by the time next year's Directory is published. Many new products will be on the market. The channels of distribution will continue to evolve. To make the most of the potential of classroom computers, those who use them will need to follow the market: "do their homework" as they consider what to use and what to buy. Shrewd purchasing in the educational computing field takes more informed judgment than purchasing in other areas. The 1982-83 Instructor Computer Directory for Schools will make the job easier.





FROM MINNEAPOLIS

School systems everywhere are discovering that the value of ATARI computers adds up quickly.

When you compare how much ATARI class-room computers can do, and how little they cost, you'll appreciate why more and more school systems nationwide are putting ATARI computers at the head of the class.

Read on and discover why four widely-separated school districts, with varying needs, all recently chose ATARI computers over the competition.

Minnesota discovered that the capability and compatibility of ATARI computers go hand in hand.

The Minnesota Educational Computing Consortium (MECC) was the first statewide educational computing organization to use computers. After experience with some 2,800 classroom computers, MECC determined that ATARI computers could meet many of their needs at a much lower cost. They were able to convert a significant portion of their existing software to the ATARI computer system. MECC expects

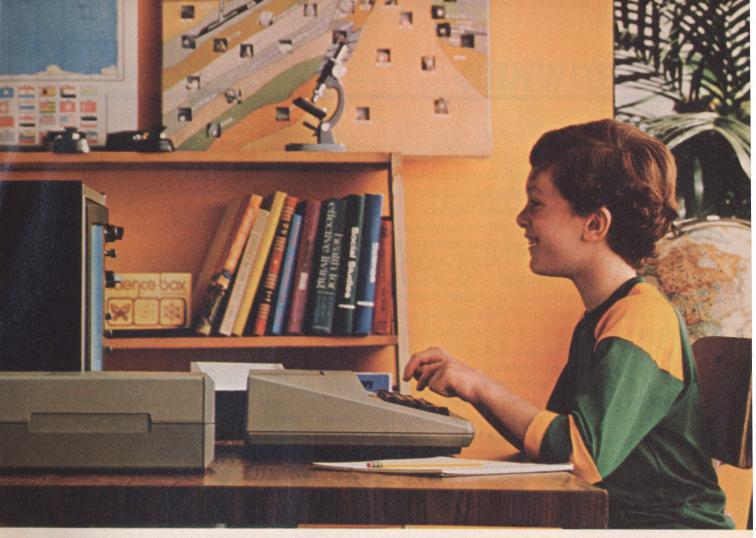
the ATARI 400 computer systems with the ATARI 810 disk drives to make a big difference in Minnesota, and MECC is continuing to invest in ATARI for the future.

It made sense to start with ATARI computers in Dade County, Florida.

In Florida, Dade County Public Schools wanted to initiate a computer literacy, computer-assisted instruction program for elementary through high school levels, but hold down costs. The best computer value, from both a hardware and software point-of-view, was imperative. After a painstaking evaluation of 12 different computer systems, Dade County chose ATARI 800 classroom computers, ATARI 810 disk drives and ATARI software. They were convinced that ATARI computers gave the best combination of capability and value.

Good all-round value with specific application advantages. That's why Fairfax County in Virginia chose ATARI computers.

The exceptional capability and value of ATARI



TO MIAMI ATARI COMPUTERS ARE GOING TO THE HEAD OF THE CLASS.

computers also met a need for the Fairfax County Public Schools in Virginia. They, too, wanted the best overall computer value from both a hardware and software standpoint, and after investigating the alternatives, decided upon ATARI 800 computers and ATARI 810 disk drives. Fairfax County was particularly impressed with the ATARI 800 computer system's screen editing capability, along with its color graphics and sound, for the development of computer literacy software. The ATARI PILOT language is being considered for introducing programming experiences to both teachers and students in grades K-8.

In Cupertino, California, they know a good computer when they see one.

When you're located in the heartland of the California computer industry, as the Cupertino Public School System is, you know you can choose from the best classroom computers available. Last fall, when it came time to add to its computer literacy and computer-assisted instruction

program, Cupertino chose ATARI classroom computers. They purchased ATARI 800 computers and ATARI 810 disk drives because they felt ATARI offered the best overall capacity for the money. They were also excited by how ATARI Microsoft Basic and the ATARI PILOT language helped solve software needs. An added bonus was the ATARI Program Exchange where the school system could obtain additional innovative software on a regular basis.

ATARI is at the head of the class.

We could go on, as the ATARI computer educational success stories continue to roll in. But we'd rather you had the chance to see for yourself what ATARI computers can do for your schools. To begin your own success story, simply write to: ATARI, Inc., Dept. E1S, P.O. Box 16525,

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Denver, CO 80216.

Educators usually bring computers into their schools for specific reasons—remediation, enrichment, computer literacy. But then they discover that computers are more useful than they had imagined. They discover applications in every subject, as well as in administration and instructional management. They also discover the hundreds of plug-in and add-on devices, the hardware peripherals, that promise to transform their simple, friendly little microcomputers into powerhouses of electronic capability—graphics tablets, through which they can enter sketches, graphs, and artwork into their computers; disk drives, which provide fast and convenient storage and retrieval of programs and data; printers, through which their computers can produce typed documents; plotters, for sketching; graphs; modems, through which their computers can communicate with other computers by telephone; voice and music synthesizers; network devices, which link machines into a powerful multiuser system.

Successful application of all of these components requires hardheadedness—research, analysis, planning, management. Purchasing plans require skillful orchestration of vision, hardware, software, facilities, supplies, people, and administrative procedures.

Let's start with vision. Before you buy hardware, decide what you want to accomplish—raise test scores, enhance problem-solving skills, prepare students for the job market? How will you use computers to help you accomplish these goals—drill and practice, games, simulations, programming?

Then there are logistic questions to confront. At what grade level will the computers be introduced and in what subjects? How many students will need to use the computers? How often, where, and for how long? How will you train teachers and students to use the computers, and how will you provide for continuity from one grade level to the next? And finally, what special constraints must you deal with? Budgets, building security, union rules, parental attitudes? A carefully chosen and well-informed committee can be invaluable in helping you resolve these issues.

Now let's look at hardware selection. A good rule is to first find software that does what you need and then have the dealer tell you what kind of equipment you need to support the software. This is somewhat easier to say than do, but it will simplify your hardware selection considerably.

Second, consider the *whole* system—the users, the hardware, the software—and not just the component pieces. An educational computing system is made up of people and machines. The machines must respond to the people and serve their specific limitations and needs.

Here are a few questions to consider before buying equipment:

What kind of data will users want to enter, and what is the most efficient way for them to do it? An answer here will help you evaluate keyboards and other input devices.

What size programs will users want to run? This will tell you how much memory your computer must have. Speaking of memory, it's important to consider both the amount of memory in the computer itself (random access memory) and mass storage capacity of the system (cassette or disk storage).

Some computers only provide uppercase video character display and others provide both upper- and lowercase. Is this important? What about graphics? Are they necessary? Is color important? How much resolution do you need? Do you need fast animation or other special features?

Except for the simplest setups, your computer system will need a printer. But how fast does it need to be? And how rugged? Do you need letter quality or special fonts? Is noise a factor?

Do you want to connect your computers into a network—either within the school or across the country? How will you handle security and maintenance?

Once you've defined your educational mission, talk with several reputable dealers who can help you design a package. Give them your detailed performance criteria and let them recommend specific products. Request bids and negotiate a clause in the final contract that says that the dealer will bear responsibility if the system doesn't meet your explicitly stated needs. You may pay more in the beginning, but you're more likely to save in the end. A good dealer will help you with selection, initial setup, inservice training, maintenance, and upgrading.

Use this list of hardware products available to educators as a guide. Request and study the manufacturers' literature. Read reviews in the computing magazines. Try the machines at dealers' showrooms and at conventions. Don't buy without a demonstration. Look before you leap.

Computers

ACE 1000

A 64K personal computer that runs software developed for the Apple. Can be adapted to run CP/M programs. **Price:** \$1595.00 **Producer:** Franklin Computer Corp.

Advantage

CP/M-compatible computer system with graphics. Printers available. **Price:** Under \$4000.00 **Producer:** North Star Computers, Inc.

AIM 65 Microcomputer

Includes 1K of RAM, up to 20K of ROM, keyboard, 20-column printer, 20-column display, monitor program with text editor and single-step execution, and cassette tape interface. Language software additional. **Price:** \$465.00 **Producer:** Rockwell International.

Apple II, Apple II+, Apple III

Personal microcomputer plus disk drive is the basis for a system that is expandable, flexible and versatile enough to meet almost any application. **Price:** From \$1500.00 **Producer:** Apple Computer, Inc.

ATARI 400™ Personal Computer System

An 8-bit microcomputer with touchsensitive keyboard, upper- and lowercase screen display, up to 16 colors and four channel sound. Full line of peripherals available. **Price:** \$299.00 **Producer:** ATARI, Inc., Home Computer Division.

ATARI 800™ Computer

Sixteen-color computer with graphics and sound capabilities, upper- and lowercase character set. Basic computer includes 16K memory expandable to 48K, 8K BASIC cartridge and instructional materials. **Price:** \$899.00 **Producer:** ATARI, Inc., Home Computer Division.

Bell & Howell Microcomputers

Two 48K microcomputers, one of which includes enhancements such as a permanently attached power cord and three built-in electrical outlets. Installation and training available. **Price:** From \$1630.00 **Producer:** Bell & Howell Co.

CBM, 8000 Series Computers

Desk-top computers with integrated displays, keyboards and processors. Provide 80-column-by-25-line display. Have typewriter-style keyboards and separate numeric keypads, upper- and lowercase and graphic characters. **Price:** \$1495.00 **Producer:** Commodore Business Machines.

CCC Microcomputer

Z-80A based with hi-res graphics, 64K memory and minimum of one 1.2 megabyte disk drive. Runs CCC's curricula plus CP/M-based programs. Training, hotline and demo disk available. **Price:** Under \$5000.00 **Producer:** Computer Curriculum Corp.

Commodore-64

Newly released color computer with 64K memory, hi-res graphics and programmable music synthesizer. Monitor additional. **Price:** Under \$600.00 **Producer:** Commodore Business Machines.

Corvus CONCEPT™ Computer

Motorola 68000-based professional workstation. Includes: keyboard, screen, built-in OMNINET capability, 256K of memory. Also includes word processor and CP/M operating system. **Price:** From \$5000.00 **Producer:** Corvus Systems, Inc.

Dolphin TM

Multi-user classroom computer system runs eight video terminals and a printer simultaneously. Enhanced 16-user version due in late 1982. Training, toll-free service number and full maintenance contract provided. **Price:** * **Producer:** TSC, A Houghton Mifflin Company.

DPS Computer System

A series of mini- and mainframe computers with all accessories and peripherals. **Price:** * **Producer:** Honeywell Information Systems Inc.

ECK-85S Component Kit

Kit contains components and documentation for building a minimum microcomputer system based on the 8085 microprocessor. Kits are available for other microprocessor families as well. **Price:** \$35.00 **Producer:** Intel Corp., Educational Products Group.

* = Contact producer or distributor

Epson HX-20 Microcomputer

Standard computer has 16K RAM expandable to 32K. Built-in dot-matrix LCD display and 24-column dot-matrix printer. Other peripherals available. **Price:** From \$800.00 **Producer:** Epson America, Inc.

FX-702P Pocket Computer

Pocket computer displays up to 20 alphanumeric characters. Programmable with up to 55 BASIC commands. **Price:** \$199.95 **Producer:** Casio Inc.

FX-80IP Pocket Computer

Hand-held computer with 20-character display, built-in cassette tape recorder and built-in printer. Programmable with up to 55 BASIC commands. Price: * Producer: Casio Inc.

Heathkit — Zenith Data Systems HS-89

All-in-one computer kit with 48K RAM expandable to 64K. Built-in disk drive, plus up to 11 megabytes of extra storage. Requires HDOS or CP/M operating system. Peripherals available. **Price:** From \$1895.00 **Producer:** Heathkit Education Systems, Zenith Radio Corp.

HP-85A Computer

Portable personal computer with integrated CRT, mass storage device, keyboard and thermal printer. **Price:** \$2750.00 **Producer:** Hewlett Packard Co., Personal Computer Division.

HP-86 Personal Computer

BASIC-language personal computer features graphics and music capabilities. Memory expandable to 576K. CP/M, Pascal, FORTRAN 77 and BASIC Training Pacalso available. Requires monitor. **Price:** \$1795.00 **Producer:** Hewlett Packard Co., Personal Computer Division.

IBM Personal Computer

A 16-bit microcomputer with 16 to 256K of RAM and 40K of ROM. Includes BASIC and self-diagnostics. Detached keyboard with ten function keys and ten-key numeric pad. Peripherals available. **Price:** From \$1565.00 **Producer:** IBM Information Systems Div.

1 HARDWARE

computers

IDC-88[™], IDC-86[™] and IDC-68000[™] Computers

Three single-board computers appropriate for teaching how computers work. Based respectively on Intel 8088, Intel 8086 and Motorola 68000 chips. Each requires power supply and RS-232 terminal. Service hotline available. **Price:** From \$99.00 **Producer:** Intelligent Devices Corp.

Intelligent Systems Model 3651

Integrated color graphics computer. Contains disk drive, monitor, keyboard, processor and BASIC. **Price:** \$2145.00 **Producer:** Intelligent Systems Corp.

Keymate C-100 Computer

A 48K color computer system based on a 6502 microprocessor. System includes disk drive, modem, and business and programming software. Needs monitor. **Price:** \$3000.00 **Producer:** M/A-COM OSI.

The Link™

A 6502-based computer with 4K of RAM. LCD display with 26 characters and wraparound feature. Memory expandable to 48K. Ports for up to six peripherals. Software, peripherals and carrying case available. **Price:** From \$380.00 **Producer:** Panasonic Co., H.H.C. Dept.

Mariner and M/System

Two small, multi-user computers. Each can handle up to eight users and 84 megabytes of hard disk storage. **Price:** From \$3995.00 **Producer:** Micromation, Inc.

μLab II

Single-board computer teaches physics and chemistry students about computers and their applications in science. Lab includes SYM computer, power supplies, six programs and an interface board. **Price:** \$995.00 **Producer:** Cambridge Development Laboratory.

Monroe EC 8800 and EC 8820 Computer Systems

Complete computer systems include built-

in disk drives, 128K memory, operating systems, CP/M, BASIC and graphics. EC 8800 built for education with separate monitor for class use. **Price:** From \$3295.00 **Producer:** Monroe Systems for Business.

NEC PC-8001A Microcomputer System

Personal computer system includes computer, input-output unit, disk drive, dot-matrix printer and color or green monitor. Includes *N-BASIC*. Six-volume *Creative Programming* series and *General Ledger Accounting System* available. **Price:** * **Producer:** NEC Home Electronics, Inc.

Osborne 1

Portable, CP/M-based complete computer with 64K, two disk drives, built-in monitor. Comes with: CP/M, WordStar, SuperCalc, CBASIC and MBASIC. Service through dealers. Thirty other software packages available. Price: \$1795.00 Producer: Osborne Computer Corp.

PC-1211 Pocket Computer

Has a program capacity of 1424 steps and 26 memories with memory safeguards. Dot-matrix display of up to 24 digits with rolling writer. Uses BASIC. **Price:** \$160.00 **Producer:** Sharp Electronics Corp.

PC-1500 Pocket Computer

Hand-held pocket computer. Includes BA-SIC. Accessories include cassette recorder for recording programs and data, CE1500 printer interface and RAM expansion modules. **Price:** \$300.00 **Producer:** Sharp Electronics Corp.

PET, 4000 Series Computers

Desk-top computers with integrated keyboards, displays and processors. Typewriter-style keyboards plus numeric keypads. Display upper/lowercase and graphics characters on 12-in., 25-line-by-40-column monitors. Up to 96K. Price: From \$995.00 Producer: Commodore Business Machines.

The Professionals: 325 and 350 Computers

Two 16-bit computers based on PDP-11 microprocessor. Have 256K of memory. Include keyboards and dual-disk drives. Options include 15 foreign-language keyboards and real-time interfaces. **Price:** \$4200.00 **Producer:** Digital Equipment Corp., Educational Computer Systems.

Rainbow 100

CP/M-based color computer operates in both 8- and 16-bit modes. Standard 64K

memory is expandable to 256K. Dual-disk drive included. Options include 15 foreign-language keyboards. **Price:** From \$3500.00 **Producer:** Digital Equipment Corp., Educational Computer Systems.

Sinclair ZX81 Computer

Hand-held computer. Programming features include single stroke entry and automatic syntax checking. Software sold separately by Sinclair. Needs TV for display and cassette recorder for storage. Includes cables. **Price:** \$149.95 **Producer:** Sinclair Research Ltd.

Single Board Microcomputer (MEK 6802-DS)

Based on the M6800 family of microprocessors. Has 25-key keypad for program entry and LED readout. Includes power supply. **Price:** From \$199.00 **Producer:** Motorola Corp.

SMC-70 Desktop Microcomputer

Z-80A-based microcomputer with 64K of memory. Separate memory for graphics and systems functions. Thirteen interface ports. Includes keyboard and CPU. **Price:** \$1475.00 **Producer:** Sony Corporation of America, Microcomputer Products Div.

SP9000, SuperPET Computer

Includes integrated 80-column-by-25-line display, keyboard and both 6502 and 6809 microprocessors. Features upward compatibility with the 8032 Computer and BASIC, APL, Pascal, FORTRAN, COBOL and Assembly languages. Price: \$1995.00 Producer: Commodore Business Machines.

System One

Multi-user computer lets up to three people share one system. Available languages include LISP, C, BASIC, FORTRAN and Pascal. Needs monitor. Price: \$3995.00 Producer: Cromemco, Inc.

TI 99/4A Home Computer

TI-9900-microprocessor-based system with 16K of RAM and TI BASIC. Offers 16 colors, sound, music and synthesized speech. Expandable to 48K. **Price:** \$454.00 **Producer:** Texas Instruments, Inc., Personal Computer Division.

* = Contact producer or distributor

"THE COMMODORE 64 COULD BE THE MICRO-COMPUTER INDUSTRY'S OUTSTANDING NEW PRODUCT INTRODUCTION SINCE THE BIRTH OF THIS INDUSTRY."

-SHEARSON/AMERICAN EXPRESS



The Commodore 64 is 33% more powerful than computers costing twice as much.

For \$595*, it has features like 64K RAM, high-resolution graphics, a sophisticated music synthesizer and educational software such as LOGO programs developed for the PET. So you can take advantage of existing software you have, while upgrading the power of your computers at the same time.

It comes from a company that's famous for delivering maximum computer performance at minimum cost. (In the CBM and PET series, SuperPET and the VIC-20, for example.)

When you see what it can do, you'll see what the usually conservative Shearson/American Express is absolutely raving about.

*Manufacturer's Suggested Retail Price: July 1, 1982



1 HARDWARE

computers

TRS-80 Color Computer

Basic computer comes with 4K of RAM expandable to 32K. Attaches to color TV or monitor. Includes BASIC. External disk drives available. **Price:** From \$399.00 **Producer:** Radio Shack.

TRS-80 Model III

All-purpose desktop computer. External disk drives available. **Price:** From \$699.00 **Producer:** Radio Shack.

TRS-80 Pocket Computer

Hand-held computer features 65-key keyboard with 10 pre-programmed command keys, 26-character display and BASIC. Has 2640-character program and data memory, expandable to 16K. Color printer available. **Price:** \$279.95 **Producer:** Radio Shack.

TSC 300 Computer System

Multi-user computer system runs up to 32 terminals and one printer simultaneously. Training and toll-free service number provided. **Price:** * **Producer:** TSC, A Houghton Mifflin Company.

Tymshare Dynasty Systems

Series of multi-user computer systems with up to one megabyte user memory. Available with full line of UNIX-based software and DEC-licensed operating systems. Can link to the Tymnet data communications network. Leasing possible. **Price:** From \$19,900.00 **Producer:** Tymshare, Inc.

VIC-20

Color computer features sound, graphics, programmable function keys, built-in BA-SIC language interpreter, typewriter-style keyboard and up to 32K memory. Monitor separate. Full range of peripherals available. **Price:** \$299.95 **Producer:** Commodore Business Machines.

Virtual Storage (VS) 25 and 45 Computers

Two microprocessor-based, 16-bit computers with 64K RAM. Compatible with software for any of Wang's VS computers. **Price:** From \$21,000.00 **Producer:** Wang Laboratories, Inc.

Wang Professional Computer

A new, 16-bit computer that functions as a

stand-alone unit or as a workstation for any Wang 2200, VS, OIS or Alliance system. Toll-free technical assistance during business hours. **Price:** \$2695.00 **Producer:** Wang Laboratories, Inc.

Z89-81 Assembled Computer

Stand-alone computer with 48K of RAM. Includes floppy disk drive (100K), three-port serial interface and CRT. Comes with CP/M, *SuperCalc* and MicroSOFT BASIC. **Price:** \$2895.00 **Producer:** Heathkit Education Systems, Zenith Radio Corp.

Z90-80 Assembled Computer

Stand-alone system with 64K of RAM. Internal controller board only. Can be interfaced with Z37 dual-disk drive. Includes CP/M, *SuperCalc* and MicroSOFT BASIC. **Price:** \$2895.00 **Producer:** Heathkit Education Systems, Zenith Radio Corp.

Z90-82 Assembled Computer

Stand-alone system with 64K of RAM. Includes built-in dual-disk drive. Optional Z87 dual-disk drive adds 320K. Includes CP/M, *SuperCalc* and MicroSOFT BASIC. **Price:** \$3195.00 **Producer:** Heathkit Education Systems, Zenith Radio Corp.

Computer Terminals

Free Scan Speech Terminal, Model 3

Gives voice response to data called up from the host computer system. Operates in three speech modes: spelled speech, punctuation, and full word speech. **Price:** \$4495.00 **Producer:** Triformation Systems, Inc.

INFONE

Small terminal with 40-character screen and keyboard allows direct communication with computer bank. Operates acoustically or with direct connection. **Price:** * **Producer:** Novation, Inc.

Micro Brailler 2400

Microprocessor-controlled, paperless Braille device allows storage of 1000 pages of Braille on a 90-minute cassette tape. Portable, weighs eight pounds and can operate up to 12 hours on batteries. Requires RS-232 interface. **Price:** \$4850.00 **Producer:** Triformation Systems, Inc.

Shadow/VET

Voice entry terminal for use with most software for Apple II and Apple II+ computers. **Price:** \$995.00 **Producer:** Scott Instruments Corp.

6300 Graphics Workstation

Workstation for Wang OIS and VS series computers supports data processing, word processing and graphics use. Has tiltable, non-glare screen and separate keyboard. **Price:** \$5985.00 **Producer:** Wang Laboratories, Inc.

Tymshare Scanset 410 and 415

Two computer terminals designed for noncomputer professionals. Feature one-button access to data bases. **Price:** From \$495.00 **Producer:** Tymshare, Inc.

Tymshare Terminals

Wide range of terminals, both standard and intelligent. Some with built-in dot-matrix printers. **Price:** From \$1157.00 **Producer:** Tymshare, Inc.

Controllers

Adam and Eve Paddles

Game paddles for Apple II, Apple III and IBM computers. **Price:** \$40.00 **Producer:** West Side Electronics, Inc.

ATARI CX40[™] Joystick and CX404[™] Paddle Controllers

Game paddles and joysticks allow user to control cursor movement without typing. **Price:** \$21.95/pair **Producer:** ATARI, Inc., Home Computer Division.

Pro-Paddle

Game paddle for the Apple II features push buttons with incised labels (0 and 1) and precision rheostats. **Price:** \$47.50 **Producer:** EduTech.

TI Wired Remote Controllers

Let TI microcomputer users play games and create graphics or sounds without using the keyboard. **Price:** \$34.95 **Producer:** Texas Instruments, Inc., Personal Computer Division

VIC 1311 Joystick

Single joystick allows user to enter data into the computer without typing. Permits combinations of commands. **Price:** \$9.95 **Producer:** Commodore Business Machines.



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Boston Region Dick Callahan (617) 848-0780





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We Take Classroom **Computing Seriously**

That's why Radio Shack has a full-time Educational Coordinator near you. These professionals are experienced field representatives for our classroom-proven TRS-80 microcomputers and courseware materials. Their job is to help you decide how your class or your entire school system can benefit from the TRS-80. To find out more, call one of your Radio Shack Educational Coordinators today. They're all across the country . . . and close by when you need them.



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1 HARDWARE controllers

VIC 1312 Two-Player Game Paddles

Two paddle controllers on one plug. Connects to VIC game port. Each controller provides full-rotation dial and "fire-button." **Price:** \$19.95 **Producer:** Commodore Business Machines.

Furniture

Advance DPS Series Tables

Stationary work station for computer equipment. Eight models. **Price:** From \$191.00 **Producer:** The Advance Products Co.

Apple-Center

Cabinet holds an Apple II, a 9-in. monitor and one or two disk drives. Includes voltage line surge protection and a cooling fan. Can be bolted to a table. **Price:** \$229.00 **Producer:** Doss Industries.

CRT Tables

For stand-alone applications of CRT's and microcomputers. Wood top, metal legs and modesty panel. **Price:** From \$137.00 **Producer:** Bretford Manufacturing, Inc.

EC10 Education CRT Table

Adjustable, mobile CRT table designed for educational applications. Four-in. casters provide mobility. Adjustable work surface plus adjustable shelf allow eye-level viewing of monitor. **Price:** \$225.00 **Producer:** Bretford Manufacturing, Inc.

Educational Computer Work Center

Work table available in 30-in., 36-in. and 48-in. widths. Constructed of tubular steel with 1-in. wood laminate top. Equipped with a steel shelf for the disk drive and storage space for disks or cassettes. **Price:** From \$245.00 **Producer:** Luxor Corp.

F336 Mobile Utility Truck

Steel cart on casters transports computer, tapes, components, etc. Has three shelves. **Price:** \$149.00 **Producer:** Bretford Manufacturing, Inc.

LEM Study Carrel®

Learning-work station designed for individual and small group use of computer terminals, video or audiovisual equipment. Options include acoustical treatment on side panels. **Price:** * **Producer:** Synsor Corp.

Mini Printer Stands

Designed for smaller tabletop printers. Elevate the printer to the proper height to allow paper flow. Solid steel construction. **Price:** From \$29.95 **Producer:** Bretford Manufacturing, Inc.

Mobile Microcomputer Station

Modular mobile unit for all makes of microcomputers. Has swivel casters. Options: separate monitor shelf, two-drawer pedestal, tray for cords, electrical outlet, security mount for monitor. Price: * Producer: H. Wilson Co.

Monitor Security Mount

Locks monitor to table. Mounts directly to surface. Padlock provided. Price: ★ Producer: H. Wilson Co.

Printer Stands

Three models feature special clamping systems, steel construction with chrome tubular legs and swivel-ball casters. One model has cabinet with key lock. **Price:** ★ **Producer:** H. Wilson Co.

Tuffy Carts

Utility carts carry up to 200 lbs. Assemble easily. Five-year warranty. **Price:** ★ **Producer:** H. Wilson Co.

UNI-1 Adjustable Universal Printer Stand

Holds most any printer. Adjustable brackets provide the proper depth and width. Open leg design allows proper feeding of paper. **Price:** \$139.00 **Producer:** Bretford Manufacturing, Inc.

Work Stations

Heavy-duty work stations for computer systems. Solid steel base combines with wood top for extra strength. Modesty panel and 8-in. accessory shelf. **Price:** From \$195.00 **Producer:** Bretford Manufacturing, Inc.

Graphics Peripherals

HIPAD Digitizer

Tabletop graphics pad converts graphic information into digital values usable by a

computer. Requires microcomputer with RS-232C or parallel interface. **Price:** From \$825.00 **Producer:** Bausch & Lomb, Instruments and Systems Div.

HIPLOT DMP Series Plotters

Digital plotters with surface areas of 8½-in. by 11-in. Standard and intelligent models and multicolor features available. Require microcomputer with RS-232C or parallel interface. **Price:** From \$1085.00 **Producer:** Bausch & Lomb, Instruments and Systems Div.

Intelligent Pen Plotter

Plotter comes in one-, two-, six- or ten-pen configurations. Takes roll and sheet-feed paper. Plot area is 10-in. by 15-in. Can use most interfaces. **Price:** * **Producer:** Watanabe Instruments Corp.

Model DXY Four-Color Plotter

Four-pen, X-Y coordinate plotter for personal computers. Includes Centronics interface. **Price:** \$949.00 **Producer:** Amdek Corp.

Multi-Pen Plotter

Uses six color ballpoint pens. Automatic pen selections. Simple BASIC commands draw straight lines, arcs and circles. **Price:** \$1995.00 **Producer:** Radio Shack.

Summagraphics Graphics Tablets

Four lines of graphics tablets: Bit Pad One, ID Series, Supergrid and Summagrid. Graphics tablets allow user to enter graphics into the computer without programming. Price: * Producer: Summagraphics Corp.

TRS-80 Digitizer

Graphics tablet works with an 11-in.-by-17-in. area. Swivel head allows operation in vertical plane. Measures areas, lengths, distances, etc. Point and continuous modes. Includes software for basic applications. Price: \$449.00 Producer: Radio Shack.

TRS-80 Plotter/Printer

Draws an assortment of straight or curved lines and geometric figures to create precise charts and graphs. Four character sizes and rotations. **Price:** \$1460.00 **Producer:** Radio Shack.

Tymshare Model 550 and 551 Plotters

Two multicolor graphic plotters that accept data from a computer or other electronic data device. Both need RS-232C interfaces. Leasing agreements available. **Price:** From \$5300.00 **Producer:** Tymshare, Inc.



TILOGO: It opened a door they thought was locked.

It opened a door to their minds.

The key: a Texas Instruments Learning Computer and TI LOGO, a programming language developed by TI and MIT.

In his inner-city, New York junior high classroom, teacher Steve Siegelbaum explains why it works so well.

"When they use it, they think they're teaching the machine. In reality, it's teaching them how to learn. It definitely improves their attitude toward their other courses. Written and verbal expression improve—they're eager to show you, to tell you, what they've done."

Another teacher, Pete Rentof, adds, "What it fights is fear of failure –a mistake becomes a starting point. The whole learning process turns into a positive experience. It works."

The TI Learning Computer,

with TI LOGO and many other educational programs, is equipped to help open doors in any classroom. Including yours. For information on this remarkable system, contact: Texas Instruments Customer Relations, P.O. Box 53 Lubbock, Texas 79408.

TEXAS INSTRUMENTS

Circle No. 167 ON READER INQUIRY CARD.

Learning Aids

Alphadrill

Electronic learning aid generates 10- to 30question lessons that reinforce vocabulary decoding skills. Includes software used for diagnosis and prescription. For upperelementary and secondary students. **Price:** * **Producer:** Centurion Industries, Inc.

Alphaspell

Electronic learning aid presents 10- to 30question lessons that drill basic spelling skills. Software covers consonants, vowels, compound words, affixes, contractions, spelling demons. Can be used for prescription and diagnosis. **Price:** * **Producer:** Centurion Industries, Inc.

Alphator I, II and Alphamaster

Three electronic learning aids generate 10to 30-question lessons on basic reading skills. Each contains own software. Can be used for remediation. **Price:** From \$279.50 **Producer:** Centurion Industries, Inc.

The Children's Discovery System™

Portable learning aid for ages 6-11 has music and graphics capabilities. *Discoveries In*[™] learning activities available in subjects including math, science, geography, spelling, art, programming, for extra cost. **Price:** \$100.00 **Producer:** Mattel Toys.

Diet Trac[™] Personal Diet Computer System

Portable, pocket-size computer that provides personalized diet plan based on standard nutritional tables. **Price:** * **Producer:** Mattel Electronics.

Digitor Drillmaster, Tutor, Skillmaster and Superdrill

Four electronic learning aids for various grade levels generate lessons in basic math skills at varying levels of difficulty. Contain their own software. **Price:** From \$119.50 **Producer:** Centurion Industries, Inc.

Intellivision® Intelligent Television

Video game machine expands to computer with addition of a keyboard. Includes microphone and built-in cassette player. Educational cassettes available. **Price:** * **Producer:** Mattel Electronics.

Rainbow

Portable electronic learning aid. Uses specially designed lessons sold separately: math, reading, language arts, social studies, science (Grades 2-8). Scores and times (optional). Lessons at four levels of difficulty. **Price:** \$139.00, \$10.95/lesson **Producer:** Educational Insights.

Speak & Read™ Reading Connection

Supplemental reading program contains six each of the following: *Speak & Read™* devices, module packs, workbooks, headsets, adapters. For Grades K-3. **Price:** \$895.00 **Producer:** Scott, Foresman and Co., Electronic Publishing Div.

TLC, The Teach and Learn Computer

Electronic learning system features voice output. Uses keyboard overlays and records to change subject areas. Includes six overlays and record disks. Others available. **Price:** From \$50.00 **Producer:** Mattel Toys.

Versator™ Educational Computer

Dedicated computer features randomly generated individual and group lessons, networking capability, hard copy recordkeeping and programmable difficulty levels. Math, spelling, reading and vocabulary software available. **Price:** \$299.50 **Producer:** Centurion Industries, Inc.

Memory Devices

ATARI 410™ Program Recorder

Stores up to 100K of data per 60-minute cassette. Provides synchronized audio and data tracks for use with ATARI *Talk & Teach™* software and other program cassettes. **Price:** \$99.95 **Producer:** ATARI, Inc., Home Computer Division.

ATARI 810™ Disk Drive

Provides up to 88K of high-speed data access per 5 1/4-in. disk. **Price:** \$599.95 **Producer:** ATARI, Inc., Home Computer Div.

* = Contact producer or distributor

Cartridge Drive System

Hard disk with 10 megabytes on-line storage plus unlimited off-line storage. Technical training available. **Price:** \$5995.00 **Producer:** Cameo Electronics, Inc.

Commodore Dual Disk Drives

Three 51/4-in. floppy disk drives: CBM 4040, CBM 8050, CBM 8250. Store 370 kilobytes, one million and two million bytes of data respectively. For PET, SuperPET and CBM computers. Price: From \$1295.00 Producer: Commodore Business Machines.

Commodore Single Disk Drives

Two single 5½-in. disk drives: VIC 1540 for VIC-20 and Commodore-64 computers. CBM 2031 for PET, SuperPET and CBM. Both store up to 170K per disk. **Price:** From \$599.00 **Producer:** Commodore Business Machines.

Corvus Winchester Hard Disk Drives

Mass storage devices with 6-, 11- and 20-megabyte capacities. Interface with most microcomputers. **Price:** From \$3000.00 **Producer:** Corvus Systems, Inc.

D9060 and D9090 Hard Disk Drives

Two 51/4-in. Winchester hard disk drives. Provide 5.0 and 7.5 million bytes of storage respectively. Built-in microprocessors handle disk and file control operations. For PET, SuperPETand CBM computers. Price: From \$2995.00 Producer: Commodore Business Machines.

Disk Book TM

Disk expansion unit for IDC's series of single board computers. Comes in 8½-in.-by-11-in.-by-2-in. case that plugs into the Computer Book™ power supply from IDC. Price: From \$299.00 Producer: Intelligent Devices Corp.

The Educator™ Kit

Package of cassette recorder, BASIC programming cartridge and educational software for the ATARI 400[™]. **Price:** \$165.95 **Producer:** ATARI, Inc., Home Computer Division.

Micro-Floppydisk Drive

Dual-disk drive for three-in. microfloppy disk is compatible with most 51/4-in. disk drives. Offers up to one megabyte double-

HOW TO GRADE A PERSONAL COMPUTER.



Whether you're a teacher or administrator — whether you're shopping for a single personal computer for your classroom or a hundred for a district-wide program — you're faced with the biggest multiple choice quiz in the history of education.

There are scores of models, hundreds of acces-

sories, thousands of courseware packages.

How can you be sure the computer you select will have the reliability, capacity and versatility you need? How do you spot built-in obsolescence? When is a low price not a bargain?

Before you buy any personal computer, put it to the test. Ask a few questions of your own, starting

with the most important one:

HOW DOES IT GET ALONG WITH KIDS?

How many schools have purchased the model you're looking at? How long has it been in classroom use? And how do students and teachers rate their experiences with it?

Most personal computer makers have very little experience working with educators and understanding

their needs.

But Apple® was one of the first personal computers brought into the classroom. We've been committed to education for over five years — and that commitment has been central to our growth.

More educators have purchased more Apple II's for more schools than

any other model of personal computer. After 1,500,000 hours in classrooms throughout America, the Apple II is still going strong.

HOW FAR WILL IT LET YOUR STUDENTS GROW?

Internal memory is critical. Measured in Kilobytes; it

*A "byte" is the equivalent of one character of information — like the letter "a" or the number "2" A Kilobyte, then, is about one thousand characters. determines how much information a computer can handle at one time.

The best courseware today is written for computers with 32-48K of internal memory. Many school purchased computers with only 16K, only to discove that they couldn't handle the latest software, especial for middle and upper grades.

The Apple II's standard memory is available in 48K and 64K. With eight expansion slots for added memory and accessories, it's almost impossible

to outgrow.

HOW MUCH COURSEWARE IS AVAILABLE

Many personal computers offer an extremely limited selection of courseware.

You'll also find that the vast majority of courseware currently available can run on the Apple II, including the large Apple library developed by the Minnesota Educational Computing Consortium (M.E.C.C.).

In fact, more leading educational publishers are developing courseware for the Apple II than for any other personal computer, including familiar names like McGraw-Hill; Random House; SRA; Holt, Rinehart; Prentice-Hall, and Addison-Wesley.

So an Apple II can help you teach hundreds of subjects, from basic math to music theory to

French vocabulary.

More major textbook publishers are writing software for Apples than for any other personal computer.



HOW MANY WAYS CAN IT EARN ITS KEEP?

The more versatile a personal computer is, the more useful it can be to the entire school.

The Apple II, for example, can move from grade to grade with the greatest of ease, teaching basic



computer literacy one period and advanced programming the next and performing any type of Computer Aided Instruction (CAI) the next.

It can also serve as the teacher's personal tool,

managing student files, monitoring class performance, generating curves and grades, and applying the speed of word processing to creating and revising tests, lesson plans, reading lists and other documents.

And the Apple II is equally at home in the administrator's office. It's a skilled accountant, an economical word processor and a compulsive organizer of files and inventories.

With a phone hook-up and a subscription to one of the national computer information networks, it can even become the school library's largest encyclopedia.

DOES IT SPEAK YOUR LANGUAGES?

As you know, different computer languages are suited to different tasks. BASIC and Logo are great for teaching programming. FORTRAN is the language of science. COBOL means business. And so on.

Most personal computers can use only one or two

languages.

But the Apple II can be fluent in every major language used in education, including BASIC, COBOL, FORTRAN, Pascal, PILOT and Logo.

PILOT is a superb language for developing your own courseware without any prior



Apple Logo, with its Turtle Graphics, is the most effective language yet developed for beginning computer instruction.

No matter what you want an Apple to do — teach computer literacy, math drills, questions and answers, vocabulary, graphics, beginning to advanced programming — it speaks your language.

CAN IT PAINT RAINBOWS?

Study after study has proven that color graphics improve spatial perceptions, lengthen attention spans and increase fun.

But not all personal computers offer color graphics. The Apple II comes standard with 16-color capability and high resolution graphics.

IS NETWORKING AVAILABLE?

Networking simply means that several computers can be linked together — at a substantial savings in equipment.

Apple's new SchoolBus[™] (available early 1983), allows several Apple II's to share peripherals, like a common printer or disk drive. It can save you up to 30% on the cost of each student station, making Apples more affordable than ever.

WHO SUPPORTS IT?

Some of the biggest names in computers aren't very big on local service. But Apples are backed by over 1200 full-support dealers in the U.S. and Canada — more than any other personal computer company.





WHAT ARE THE FINANCIAL OPTIONS?

Apple offers leasing programs specifically geared to the needs of both publicly and privately funded schools. We also have buy-agreements with the departments of education in several states for quantity purchases. And Apple's extended warranty program guarantees set maintenance costs. So administrators can accurately project their costs.

THE FINAL EXAM.

How committed is the manufacturer to education?

At Apple, we're very committed.

We've developed programs to make Apples easier to afford, and teacher training programs to make Apples easier to use.

We're constantly working with educational publishers to improve the quality and range of courseware, and to insure that future courseware will always be compatible with Apples.

And our new enhanced version of the Apple II, the Apple IIe, offers you more features than ever before.

For the location of the authorized Apple dealer nearest you, call 800-538-9696. (In California, call 800-662-9238.) When all your questions are answered, you'll find the Apple II remains the classroom standard.

And we know you'll give it high marks.

The personal computer.

PUBLISHERS DEVELOPING SOFTWARE FOR APPLE

ADDISON-WESLEY **ENCYCLOPAEDIA** BRITANNICA HARCOURT BRACE JOVANOVICH, INC. HARPER & ROW

HAYDEN BOOK

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SOUTH-WESTERN **PUBLISHING** STERLING SWIFT **PUBLISHING** WADSWORTH ELECTRONIC PUBLISHING **IOHN WILEY & SON**

EDUCATIONAL SOFTWARE AVAILABLE FOR APPLE*

Accounting Algebra Astronomy Atomic Structure Basic Living Skills **BASIC Programming** Biology

Computer Literacy

Early Civilization Elementary & High School Math Elementary Language Arts English Grammar French Geology Geometry

German Grade Reporting History Library Skills Literature Logo Programming Music Education Organic Chemistry Pascal Programming Pharmacology Physics Pre-Calculus Reading Social Studies Spanish Speed Reading

Spelling Statistics Typing Vocabulary Word Processing

*Partial list

TRS-80® COMMODORE APPLE II® ATARI 800® Model III PET MAXIMUM MEMORY: 48K 32K 64K 48K **EXPANDABILITY:** 8 Built-in Expansion RAM and Peripheral IEEE Bus, 2nd Cassette 1 Serial Port Slots, RS232, Serial, Port Edge Card Parallel & IEEE Standard Interfaces DISK CAPACITY: 140KB 134KB 170KB 88KB (Per Drive) CAN CP/M BE ADDED: Yes No No No ASCII CHAR. SET: Yes No Yes Yes COLOR: Yes No No Yes **BUILT-IN SOUND:** Yes Yes No No SERVICE CENTERS: 1.200 250 200 (Third Party) 700 (approximate) **EXTENDED** Yes No WARRANTY: Yes No SCHOOL LEASING: Yes Yes No No FACTORY SUPPORTED LANGUAGES: BASIC Yes Yes Yes Yes Pascal Yes No No No FORTRAN Yes Yes No No Logo Yes No No No PILOT No Yes Yes No Super PILOT Yes No No No COBOL Yes Yes No No

density storage. Has built-in power supply. Uses AMDISK cartridges. For IBM PC. Price: \$899.00 Producer: Amdek Corp.

Micro-Sci Disk Drives for Apple II

Three different 51/4-in. disk drives with varying amounts of storage. For Apple II computers. Come with utility disks. **Price**: From \$449.00 **Producer**: Micro-Sci.

Micro-Sci Disk Drives for Apple III

Three 5¼-in. disk drives with l43K to 572K of storage. All connect directly to Apple daisy-chain. DOS software modifications provided. **Price:** From \$499.00 **Producer:** Micro-Sci.

PEDISK II

Expandable floppy disk system for the Commodore PET, Rockwell Aim and Synertek SYM computers. **Price:** \$595.00 **Producer:** CGRS Microtech, Inc.

RAMDISK 128K Memory System

Provides 128K of extra RAM for the ATARI 800™. Can be used as an additional disk device or as bank-selectable RAM. Memory management and diagnostic software provided. Price: \$589.00 Producer: Axlon Inc.

RAMDISK 320K Memory System

Operates like two standard floppy disk drives, but with the faster speed of RAM. For Apple II or Apple II + computers with Apple DOS 3.3, Apple Pascal 1.1 or CP/M operating system and Apple disk drive. **Price:** \$1395.00 **Producer:** Axlon Inc.

SMI 7016 Floppy Disk Control Unit

Controller for 8-in., single-sided, single-density disk drive. Price: \$225.00 Producer: Sony Corporation of America, Microcomputer Products Div.

SMI-7050 Cache Disk Unit

256K solid-state disk unit. **Price:** \$875.00 **Producer:** Sony Corporation of America, Microcomputer Products Div.

TI Disk Memory System

Mass storage system consisting of TI disk controller card and one to three disk drives.

Includes Disk Manager Command Module, which lets user catalog, name, delete, copy and protect files on a disk. **Price:** From \$650.00 **Producer:** Texas Instruments, Inc., Personal Computer Division.

Traxx A35 Disk System

Apple-compatible disk drive available with or without controller card. Includes a utility disk with disk diagnostic programs. Also for systems with CP/M or Pascal. **Price:** \$395.00 **Producer:** Traxx Computer Corp.

Traxx 148 Disk System

Add-on disk drive for the TRS-80 Model I, III or Color Computer. Includes static-free dust cover. Disk drive requires a controller and DOS. **Price:** \$299.00 **Producer:** Traxx Computer Corp.

VIC 1530, Commodore Datassette

Cassette storage for user-written or prerecorded programs and data. Uses ordinary audio tape cassettes. Includes integral tape counter for rapid file access. For CBM, PET or VIC computers. **Price:** \$75.00 **Producer:** Commodore Business Machines.

Z37 Dual Disk Drive

Dual disk drive with 1.28 megabytes of storage uses double-sided, double-density, soft-sectored disks. **Price:** \$1995.00 **Producer:** Heathkit Education Systems, Zenith Radio Corp.

Z67 Winchester Disk Drive

Hard disk drive with ll megabytes of memory and a built-in 8-in. floppy drive. **Price:** \$5995.00 **Producer:** Heathkit Education Systems, Zenith Radio Corp.

Z87 Dual Disk Drive

Stores 320K of information. Price: \$1195.00 Producer: Heathkit Education Systems, Zenith Radio Corp.

Modems

Acoustic Modem TM

Data exchange can occur at any speed from 0 to 30 characters per second. Compatible with Bell 103 series modems. **Price:** \$189.00 **Producer:** Novation, Inc.

APPLE-CAT II™

Direct-connect modem. Standard 110 or 300 baud communications. Also has special 45.5 baud, Baudot-coded, Weitbrecht modem for communication with TDD network for the deaf. Price: From \$389.00 Producer: Novation, Inc.

ATARI 830™ Acoustic Modem

Allows ATARI computers to communicate with other computers over telephone lines. **Price:** \$199.95 **Producer:** ATARI, Inc., Home Computer Division.

AUTO-CAT Modem™

Direct-connect modem. Compatible with Bell 100 series modems. Data rate from 0 to 300 baud. **Price:** \$249.00 **Producer:** Novation, Inc.

CAT Modem

Acoustic modem. Works in answer, originate and test modes. Operates at 0 to 300 baud and is compatible with Bell 103 standard. RS-232 interface required. **Price:** \$189.00 **Producer:** Novation, Inc.

DCAT Modem

Direct-connect modem. Half and full duplex. Compatible with Bell 100 series. Requires RS-232 interface. **Price:** \$199.00 **Producer:** Novation, Inc.

4200 Series Direct Connect

Modems[™] Direct-connect manual- or auto-answer modems run at 1200 baud. **Price:** From \$455.00 **Producer:** Novation, Inc.

Hayes Micromodem 100, Micromodem II, Smartmodem

Three auto-answer/auto-dial modems for different computer systems. Factory service. **Price:** From \$279.00 **Producer:** Hayes Microcomputer Products, Inc.

LYNX

Auto-dial, auto-answer modem for TRS-80 Models I and II. Includes all necessary cables and software. **Price:** \$299.95 **Producer:** Emtrol Systems Inc.

The Microconnection

Modems for RS-232-compatible micro-computers. Also for TRS-80 Model I and

1 HARDWARE

modems

ATARI 400/800. Terminal software included for ATARI and TRS-80 computers. **Price:** From \$159.00 **Producer:** The Microperipheral Corp.

103LP O/A Modem

Originate/answer modem requires RS-232C interface. **Price:** \$195.00 **Producer:** Universal Data Systems.

Operator

Turns existing modem into a smart modem, letting computer dial and answer calls automatically. Requires smart terminal software for unattended use. **Price:** \$129.00 **Producer:** TNW Corp.

TI Telephone Coupler

Enables the TI microcomputer to communicate over phone lines with another computer. Requires peripheral expansion box with RS-232 card. **Price:** \$224.95 **Producer:** Texas Instruments, Inc., Personal Computer Division.

TNW-103 Low Speed Telephone Modem

Auto-answer, auto-dial modem for PET, CBM and other computers with an IEEE-488 interface. Manual, cable and terminal software provided. **Price:** \$389.00 **Producer:** TNW Corp.

212LP Modem

Manual-answer modem requires no external AC power. Requires RS-232C interface. **Price:** \$495.00 **Producer:** Universal Data Systems.

Tymshare Model 912 Modem

Originate/answer modem operates with either synchronous or asynchronous transmission. Sixteen custom options and automatic answer option available. **Price:** \$900.00 **Producer:** Tymshare, Inc.

VIC 1600, VIC MODEM (Telephone Interface)

Allows VIC owners to transfer data over the telephone lines. Permits access to telecomputing, time sharing and other re-

mote information services. **Price:** \$109.95 **Producer:** Commodore Business Machines.

Monitors

Color I Video Monitor

Color monitor with 13-in. screen has builtin speaker and audio circuit. For most personal computers. **Price:** \$449.00 **Producer:** Amdek Corp.

Color II and III Video Monitors

Two 13-in. high-resolution video monitors with 80-by-24 character displays. RGB video input. For the Apple III and IBM PC, or for the Apple II with Amdek's Digital Video Multiplexor interface. **Price:** From \$569.00 **Producer:** Amdek Corp.

Color IIA and IV Video Monitors

Two 13-in. high-resolution color monitors with 80-by-24 character displays. RGB analog input. Compatible with IBM and Apple microcomputers. **Price:** From \$999.00 **Producer:** Amdek Corp.

CPD-120 Character Display

Twelve-in. composite video monitor. Long-persistence, green phosphor, nonglare screen. **Price:** \$375.00 **Producer:** Sony Corporation of America, Microcomputer Products Div.

KX-1211H6 Trinitron Component Television

Twelve-in. high-resolution color video monitor. **Price:** \$895.00 **Producer:** Sony Corporation of America, Microcomputer Products Div.

TI Video Monitor

Ten-in. color monitor displays 24 lines of 32 characters each. Resolution is 192-by-256 dot density. **Price:** \$399.00 **Producer:** Texas Instruments, Inc., Personal Computer Division.

V-300, V-300A and V-310 Video Monitors

Three 12-in. monitors with non-glare green

or amber screens. Compatible with most microcomputers. **Price:** From \$199.00 **Producer:** Amdek Corp.

Networking Devices

CONSTELLATION

Lets up to 64 computers share one Corvus Winchester disk drive. Networked computers can also share other peripherals. **Price:** * **Producer:** Corvus Systems, Inc.

Downloader/PMC-80F

Educational network that provides each student with MicroSOFT BASIC and the teacher with a 48K disk-based computer. Thousands of programs available. Software compatible with TRS-80 Model I. **Price:** * **Producer:** Personal Micro Computers, Inc.

Network 3

Connects up to 16 student stations to host TRS-80 Model III. Students access host's disk drives and printers and can save and load programs. Allows automatic student recordkeeping. Requires RS-232C interface. Price: \$599.00 Producer: Radio Shack.

OMNINET TM

Connects up to 64 computers on a wired circuit up to 4000 feet long. **Price:** * **Producer:** Corvus Systems, Inc.

Other Accessories

Carrying and Shipping Cases by ATS

Plastic carrying and shipping containers for computers and peripherals. **Price:** * **Producer:** ATS Cases.

Cassette Control Device (CCD)

Allows the Apple to activate a cassette tape recorder. User records an oral presentation on tape, Tape is synchronized with the Apple's presentation. **Price:** \$79.95 **Producer:** Hartley Courseware, Inc.

Plug-in to mainframe power, performance, and multi-user capability. Corvus Omninet™— the standard in local area networks—and Winchester mass storage supply the missing elements that personal computers need to become intelligent work stations in versatile distributed-resource networks.

Corvus Omninet links up to 64 of the most

popular microcomputers over distances up to 4,000 feet at speeds of 1 million bits per second. Omninet provides a total networking solution with proven

Constellation software: multi-user access, security,

spooling to common printers, intercommunication, and sharing up to 80 million bytes of Corvus mass storage.

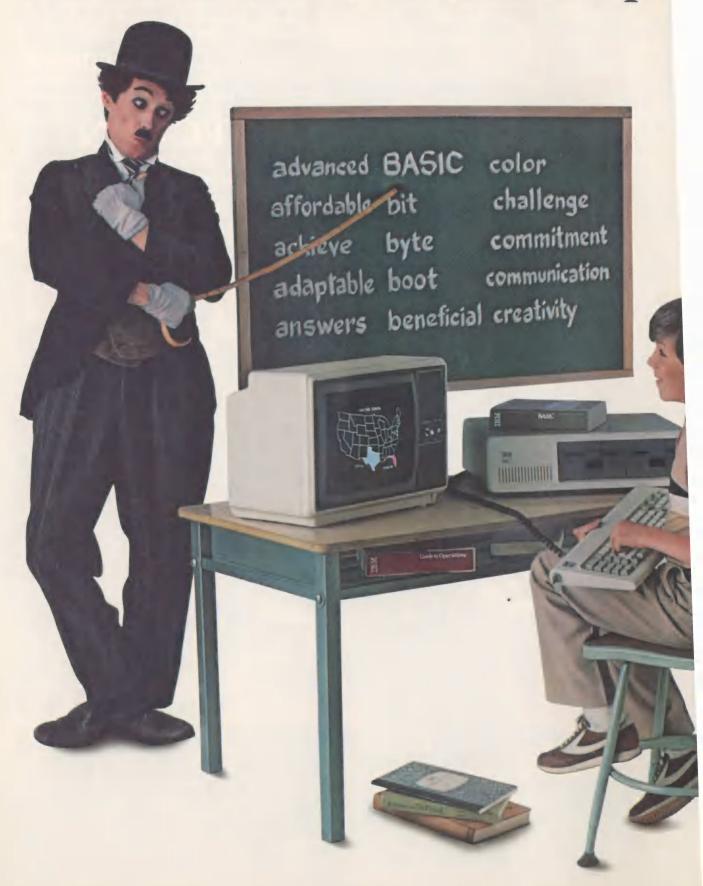
Thousands of Corvus network and mass storage systems are solving problems worldwide in installations ranging from Fortune 500 companies to

THE CORVUS CONNECTION

Networks and mass storage to transform your personal



The ABC's of the IBM Personal Compu



IBM isn't a new kid in school.

You've probably seen our name on computers, word processors and typewriters everywhere from the office to the library to the lab.

Now you can see the IBM name in the classroom, on a tool that helps teachers teach and students learn: a tool for modern times, the IBM Personal Computer.

Class act.

We've done our homework and the finished product proves it.

Inside and out, the IBM Personal Computer is a study in performance, in quality and in power.

There are advancements that, simply put, other personal computers don't match. (See the box at right.)

The keyboard is a perfect example, with 10 programmable function keys to help eliminate repetitious tasks.

Documentation is another, with instructions written clearly and concisely to offer a friendly guide rather than an imposing manual.

Memory is yet another, with user memory expandable up to 256KB—and 40KB of permanent memory that includes one of the most important tools a student can have: the BASIC language.

An education in itself.

By using BASIC and other programming languages, students not only will learn what the IBM Personal Computer can do, but will actually program the computer to do it.

The more computer-literate they are today, the more successful these

students can be in the computer-oriented world of tomorrow. That's why we designed the IBM Personal Computer as a tool to encourage learning.

IBM PERSONAL COMPUTER SPECIFICATIONS

High-resolution* 80 characters x 25 lines

Display Screen

16K-256K byte

Microprocessor 16-bit, 8088* 16-bit, 8088"

Auxiliary Memory
2 optional internal diskette drives, 5¼", 160K bytes or 320K bytes per diskette

Keyboard 83 keys, 6 ft. cord attaches to system unit * 10 function keys *

10-key numeric pad Tactile feedback* Diagnostics Power-on self testing*
Parity checking* Upper and lower case Green phosphor screen* **Operating Systems** DOS, UCSD p-System, CP/M-86|†

Languages BASIC, Pascal, FORTRAN, MACRO Assembler, COBOL

Printer Bidirectional* 80 characters/second 12 character styles, up to 132 characters/line * 9 x 9 character matrix * *ADVANCED FEATURES FOR PERSONAL COMPUTERS

Permanent Memory (ROM) 40K bytes Color/Graphics Text mode: 16 colors* 256 characters and symbols in ROM* Graphics mode:

4-color resolution: 320h x 200v* Black & white resolution: 640h x 200v* Simultaneous graphics & text capability*

Communications Asynchronous (start/stop) Up to 9600 bits per second

Nowhere else is this commitment more obvious than in the power and richness of our graphics.

Learning in living color.

Draw. Paint. Circle. Line.

Never will so few commands do so much for so many kids.

The crisp, high-resolution graphics displayed with any of the 256 text-mode characters can make numerical data a snap to understand.

More than that, our graphics help many students make an eye-opening discovery: the learning process is fun.

To find out more, visit an authorized IBM Personal Computer dealer.

You'll learn that incorporating the IBM Personal Computer into your curriculum is as easy as ABC.

For a store near you (or information from IBM about quantity purchases) call (800) 447-4700. In Illinois, (800) 322-4400. In Alaska or Hawaii, (800) 447-0890.



The IBM Personal Computer A tool for modern times

1 HARDWARE other accessories

CMA Light Pen

Designed as easy input tool for Charles Mann Associates' educational software. **Price:** \$79.95 **Producer:** Charles Mann and Associates, Microsoftware Division.

CompTrol Lab

Light detector for the Apple II + computer is appropriate for lab experiments. Software for linear acceleration and pendulum experiments available separately. **Price:** \$95.00 **Producer:** EduTech.

The Computer Book™

Box for Intelligent Devices' single-board computers. Contains 5- and 12-volt power supplies. **Price:** From \$99.50 **Producer:** Intelligent Devices Corp.

GIS Switches

Let user add up to three peripherals to a single RS-232, IEEE-488 or Centronics port. Also, three computers to one peripheral. **Price:** From \$139.00 **Producer:** General Interface Systems, Inc.

GIS Uninterruptible Power Supply

Independent power supply eliminates loss of programs and open files due to power fluctuations or failures. **Price:** \$995.00 **Producer:** General Interface Systems, Inc.

Hayes Stack Chronograph

An RS-232C-compatible calendar/clock system suitable for any computer application requiring accurate time-keeping. Features: day, date, time reporting, write-protect switch, computer alarm, battery back-up system. **Price:** \$249.00 **Producer:** Hayes Microcomputer Products, Inc.

Isolators

Electrically isolate processor, printer and disks to prevent interaction and interference. Entire system can be isolated from voltage fluctuations. **Price:** From \$70.00 **Producer:** Electronic Specialists, Inc.

KLEEN LINE Regulator, Filter and Suppressor

Prevent power line voltage variations,

spikes, lightning disturbances and electrical pollution from damaging equipment and disks. For all microcomputers except TRS-80 models. **Price:** From \$330.00 **Producer:** Electronic Specialists, Inc.

Model 1100A Intelligent CardReader

Automatic feed, optical cardreader reads marked and punched cards at 120 cards per minute. Requires RS-232C serial interface. **Price:** \$1495.00 **Producer:** Mountain Computer, Inc.

Model 5248 Stand-Alone Copier

Copies, verifies and sorts 5 1/4 in. disks with minimal operator attention. **Price:** \$15,000.00 **Producer:** Media Systems Technology, Inc.

OMR-500 and OMR-2000 Card Readers

Mark sense card readers. Personal computer applications include test scoring, attendance, grade reporting, registration and instruction. **Price:** From \$1095.00 **Producer:** Chatsworth Data Corp.

SMI-7080 Battery Backup

Provides continuity of power during AC power failures. Price: \$350.00 Producer: Sony Corporation of America, Microcomputer Products Div.

Spike-Spiker

Filters high voltage spikes and high frequency noise from power lines, preventing damage to disks. **Price:** From \$35.00 **Producer:** Kalglo Electronics Co. Inc.

Sup'R Fan

Cooling fan for the Apple II. **Price:** \$49.95 **Producer:** M & R Enterprises.

Sup'R Mod II

Modulator connects computer to a TV, transforming the TV into a monitor. **Price:** \$34.95 **Producer:** M & R Enterprises.

Sup'R Switcher

External power supply for Apple II. **Price:** \$295.00 **Producer:** M & R Enterprises.

Superclock II

Real time clock/calendar compatible with BASIC, Pascal and CP/M. **Price:** \$24.95 **Producer:** West Side Electronics, Inc.

Terrapin Turtle

Computer-controlled robot moves, beeps, draws and "feels" with touch sensors. Has been used in grade schools, special needs classes and college courses. Sold assembled or as kit. **Price:** From \$400.00 **Producer:** Terrapin, Inc.

True Data Mark Series Card Readers

Mark sense tab card readers for microcomputers with RS-232C interface. **Price:** \$1500.00 **Producer:** True Data Corp.

Vidcom System

Combines a microcomputer, VTR, television, the VIDRAM circuit board and software to provide computerized videotape instruction. Also available without computer for Apple and ATARI owners. Price: * Producer: Vidcom, Inc.

Zweig Mark Card Reader

Optical scan reader scores computer test cards and enters data into the computer. Used for attendance, class schedules and grade reporting. **Price:** \$1000.00 **Producer:** Zweig Associates, Inc.

Peripheral Boards

Apple Proc Mod and Apple-NTSC Video Converter ARS 170A

Two interface boards, each of which allows Apple users to record the computer's readout onto ½-in. and ¾-in. videotape. Brings the Apple signal closer to standard video tolerances. **Price:** * **Producer:** Adwar Video Corp.

ATARI 850™ Interface Module

Lets user connect ATARI computer to most peripherals. **Price:** \$219.95 **Producer:** ATARI, Inc., Home Computer Division.

BCD 400 Videotape Control Interface

Connects computer with video player permitting accurate positioning of videotape for any application. Training workshops available. **Price:** \$495.00 **Producer:** BCD Associates, Inc.

COMPATIBLE COLOR-I . . .

The No. 1 choice in classrooms across America!

Amdek's Color-I Monitor is designed to perform superbly in your classroom with the Apple II, Atari or VIC Commodore personal computer and others. Highly styled cabinet. It accepts a composite video signal to produce vivid, richly colored graphic and sharp text displays. Interface cables are available.

Just write, or call to receive our data sheet on the Amdek Color-I Monitor.

- Quality 260(H) x 300(V) line resolution.
- Built-in speaker and audio amplifier.
- Front mounted controls for easy adjustment.
- FCC/UL approved.

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1 HARDWARE

peripherals boards

Corvus MIRROR™

Intelligent interface between Corvus Winchester disk drives and any video cassette recorder. Allows copying data from disks to video tapes. **Price:** From \$790.00 **Producer:** Corvus Systems, Inc.

Epson Interface Boards and Cables

Parallel boards and cables for Apple and TRS-80 computers plus a serial interface board. **Price:** From \$35.00 **Producer:** Epson America, Inc.

ETS-2000 Interactive Television System

Interface card with operations software lets computer control a video player. Combines educational television segments with computer-aided instruction. **Price:** \$595.00 **Producer:** General Technical Corp.

The Grappler

Interfaces Apple II, II + and III computers with a printer. Features firmware for hi-res graphics, 23 text and graphics software commands and dual hi-res graphics. **Price:** \$175.00 **Producer:** Orange Micro.

Microbuffer II and Epson Buffer

Two print buffers store data, allowing continued use of computer while printing. Include cables. For Apple II computer. **Price:** From \$159.00 **Producer:** West Side Electronics, Inc.

Mosaic Expander

A 16K memory board for ATARI 400[™] and ATARI 800[™] Computers. Can be expanded to 32K. **Price:** \$119,95 **Producer:** Mosaic Electronics.

Mosaic 32K RAM

A 32K memory board for ATARI 400[™] and ATARI 800[™] computers. **Price:** \$179.95 **Producer:** Mosaic Electronics.

Msss D Interface II

Interfaces Apple II computer with all models of audiovisual projectors. **Price:** \$150.00 **Producer:** Msss D, Inc.

P-Code Card

Allows use of UCSD Pascal Version IV, PILOT and TMS 990 Assembly language on Texas Instruments' microcomputer. **Price:** \$249.95 **Producer:** Texas Instruments, Inc., Personal Computer Division

PrinterMate and The Dispatcher

Two interface boards for Apple computers. PrinterMate connects Apple II to Centronics dot-matrix printers. Dispatcher connects computer to letter-quality printers, modems, terminals. **Price:** From \$99.00 **Producer:** Advanced Logic Systems.

RAMCRAM 32K Memory Module

Lets ATARI 400[™] or ATARI 800[™] computers use software written for a 32K system. For ATARI 800[™], used with one 16K memory module to provide 48K of RAM while leaving the third slot open for expansion. **Price:** \$149.00 **Producer:** Axlon Inc.

Real Time Clock and Remote Controller

Two interface boards that let the computer keep time and control things outside itself, respectively. Useful for science lab experiments. Necessary software and manual included. **Price:** From \$179.00 **Producer:** SciTronics Inc.

RomWriter and ROMPLUS

RomWriter allows Apple II user to record programs permanently on ROM chips. ROMPLUS + allows one or more chips to be used simultaneously. Available separately. **Price:** From \$230.00/set **Producer:** Mountain Computer, Inc.

Sup'R Terminal

Plug-in board converts the Apple II screen display from 40 to 80 columns. **Price:** \$349.95 **Producer:** M & R Enterprises.

The Synergizer

Includes all hardware and software necessary to run CP/M on an Apple, plus the *CP/M Handbook* and *SuperCalc*. Hardware components also available individually. **Price:** \$750.00 **Producer:** Advanced Logic Systems.

* = Contact producer or distributor

TI RS-232 Interface Card

Interface card allows user to connect a wide range of EIA RS-232 compatible accessories to the TI home computer. **Price:** \$224.95 **Producer:** Texas Instruments, Inc., Personal Computer Division.

TNW-232D

Dual-port serial interface for PET, CBM and other IEEE-488-bus computers. **Price:** \$369.00 **Producer:** TNW Corp.

TNW-1000 Serial Interface

Output-only interface connects IEEE-488-bus computers to RS-232 and current loop printers and other output devices. **Price:** \$129.00 **Producer:** TNW Corp.

TNW-2000 Serial Interface

Bi-directional interface board connects IEEE-488-bus computers to RS-232 printers, modems, plotters, CRT, terminals. Baud rate adjustable. **Price:** \$229.00 **Producer:** TNW Corp.

VIC Programming Aid Cartridges

Help VIC computer users develop programs in both Assembly language and BASIC. **Price:** From \$59.95 **Producer:** Commodore Business Machines.

VIC 1011A RS-232 Terminal Interface Cartridge

Provides interface between the VIC-20 and RS-232 telecommunication modems. With a small amount of software it will also interface with other RS-232 devices such as plotters, digitizers, voice synthesizers and printers. **Price:** \$49.95 **Producer:** Commodore Business Machines.

ZVX4 Megabyter and APP-L-CACHE-256

Memory expansion systems for the Apple II. Price: From \$450.00 Producer: Sorrento Valley Associates, Inc.

Printers

Alphacom 42

Dot-matrix printer prints 40 characters per line, two lines per second. **Price:** \$249.95 **Producer:** Alphacom, Inc.

ATARI 820™ 40-Column Printer

Dot-matrix impact printer. Prints upperand lowercase at 40 characters per second. **Price:** \$299.95 **Producer:** ATARI, Inc., Home Computer Division.

ATARI 822™ 40-Column Printer

Thermal, dot-matrix printer. Prints 37 characters per second. **Price:** \$299.95 **Producer:** ATARI, Inc., Home Computer Division.

ATARI 825™ 80-Column Printer

Dot-matrix printer with three type styles and proportional spacing. Prints from 50 to 83 characters per second. **Price:** \$799.00 **Producer:** ATARI, Inc., Home Computer Division.

CBM 8300P Letter Quality Printer

Letter-quality, daisy-wheel printer with 10, 12, 15 pitch or proportional spacing. Optional tractor feed. Foreign language print wheels available. For Commodore PET, SuperPET or CBM computers. **Price:** \$2250.00 **Producer:** Commodore Business Machines.

Commodore Dot-Matrix Printers

Three dot-matrix printers: CBM 8023P and CBM 4022 for CBM or PET computers, VIC 1515 for VIC-20 or Commodore-64. Various speeds and column widths. All print graphics as well as text. **Price:** From \$395.00 **Producer:** Commodore Business Machines.

Dataroyal IPS® 5000/5000A, 5000C, 5000V

Dot-matrix printers. Print bi-directionally at varying speeds. Accessories and foreign language fonts available. Price: * Producer: Dataroyal Inc.

DS180 Matrix Printer

Prints bi-directionally at 180 characters per second. **Price:** \$1595.00 **Producer:** Datasouth Computer Corp.

EX-855 Videoprinter

Small printer connects directly to CRT. Accepts black-and-white or color signals. Uses 5-in. paper. **Price:** \$1495.00 **Producer:** Axiom Corp.

EX-1650 Printer

Full-size printer connects directly to CRT. Accepts black-and-white or color signals. **Price:** \$2995.00 **Producer:** Axiom Corp.

GP-100 Printer

Impact dot-matrix printer with adjustable tractor. Prints 30 characters per second. Prints graphics. **Price:** \$389.00 **Producer:** Axiom Corp.

IMP-4 Printer

Dot-matrix printer. Prints bi-directionally at 100 characters per second. Prints graphics. Interfaces with all small computers. **Price:** \$749.00 **Producer:** Axiom Corp.

LA50 Personal Printer

Prints 150 characters per second, both alpha-numeric and graphic. **Price:** \$950.00 **Producer:** Digital Equipment Corp., Educational Computer Systems.

Line Embossing Device, Model LED-120

A computer terminal that produces Braille

MICRO-SCI HAS THREE WAYS TO GROW A BETTER APPLE* COST, CAPACITY, COMPATIBILITY



Micro-Sci has three disk drives and two controllers so you can configure your Apple II™ or Apple II Plus™ system to fit your individual budget and performance requirements.

AZ — The new A2 is the price/compatibility substitute for the Disk II," intended as the second drive on an existing controller, or as a full A2 subsystem. The A2 drive or A2 subsystem is an ideal choice when the drives will be primarily used for prepackaged software programs.

The A2 comes with a unique new controller that also offers jumper selectable DOS 3.2 or 3.3. This controller supports any combination of A2s or Disk Ils, you have complete flexibility.

A40 — The A40 is a price/performance alternative to the Disk II. With 40 tracks, you



get an additional 20K bytes, and faster trackto-track access. The A40 is intended for use in dedicated DOS, CP/M and Pascal applications, and as a companion drive for the A70.

The A40 is Micro-Sci's most cost-effective disk subsystem for the Apple IIs.

A70 — The A70 is the price/capacity Apple alternative. At over a quarter million bytes per drive, the A70 has the capacity of two Disk IIs or an eight-inch floppy, but costs only slightly more than a single Disk II. One A70 supports a DOS file as large as 270K, a CP/M file up to 254K, and 560 blocks in Pascal.

Micro-Sci's Controllers — The A40 and A70 share a common controller. Mix A40s and A70s in any fashion, one A40 with one A70,



two A 40s or two A70s — all on the same controller.

You can have a Disk II or A2 controller with Disk II or A2 drives and still add an A40 or A70 subsystem. That's full system-level compatibility.

Versatility, reliability, capability are assured. Whatever your need, DOS 3.2, 3.3, Pascal, CP/M prepackaged software, Micro-Sci has the drive, All Micro-Sci products are backed by a full 120-day warranty (parts and labor).

Our complete line of Apple compatible products makes us the educator's choice. In these budget conscious times, increased capacity at lower cost is a great find. Call today and discover how Micro-Sci can help your students — and your budget.

"Similar product for the Apple III also available."



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Micro-Sci is a Division of Standan Controls, Inc. • 2158 South Hathaway Street • Santa Ana, California 92705 • (714) 662-2801

1 HARDWARE printers

at 120 characters per second. **Price:** \$14,500.00 **Producer:** Triformation Systems, Inc.

Model 122 Industrial Grade Graphics Printer

Bi-directional, dot-matrix printer. Prints 120 characters per second. Prints graphics. **Price:** \$1195.00 **Producer:** Centronics Data Computer Corp.

MX 80, MX 80 FT and MX 100 Dot-Matrix Printers

Three printers of varying column widths. All print 80 characters per second and require serial interface boards. **Price:** From \$645.00 **Producer:** Epson America, Inc.

Printstation 350 Series

Industrial-grade dot-matrix printers. Print 200 characters per second. Bi-directional. **Price:** From \$1795.00 **Producer:** Centronics Data Computer Corp.

Radio Shack Line Printers

Variety of models available for all TRS-80 computers. **Price:** From \$399.00 **Producer:** Radio Shack.

SMI-7020 Dot-Matrix Printer

Impact dot-matrix printer with bidirectional, incremental printing. Prints 120 characters per second. **Price:** \$800.00 **Producer:** Sony Corporation of America, Microcomputer Products Div.

Tymshare Printers

Wide range of dot-matrix and letter-quality printers. All need RS-232C interfaces. Purchase or lease. **Price:** From \$1195.00 **Producer:** Tymshare, Inc.

Z25 Printer

High-speed, bi-directional dot-matrix printer. Prints 150 characters per second and graphics. Takes paper up to 15-in. wide. **Price:** \$1595.00 **Producer:** Heathkit Education Systems, Zenith Radio Corp.

Sound Synthesizers

alphaSyntauri™ Music Synthesizer

Includes keyboard, interface card and software that allow Apple user to create, record, store, perform and teach music. **Price:** From \$995.00 **Producer:** Syntauri Corp.

CBM 4010 Voice Synthesizer

Features phoneme synthesis for vocabulary construction. Connects to user port. For Commodore computers. **Price:** \$395.00 **Producer:** Commodore Business Machines.

DAC Board

Sound production board for the Apple II. Required for all Computer Courseware Services music programs. **Price:** \$190.00 **Producer:** Computer Courseware Services, Div. EMC Publishing.

Digital Speech System

Speech synthesizer stores up to 60,000 seconds of speech sounds. For use with CCC's Instructional Computer System and audio-based reading curriculum. On-site training provided. **Price:** \$16,500.00 **Producer:** Computer Curriculum Corp.

ECHO Speech Synthesizers

Text-to-speech synthesizers compatible with any microcomputer. Teachers may design their own speech-enhanced programs or add speech to existing software packages. **Price:** From \$180.00 **Producer:** Street Electronics.

MIMIC Speech Processor System

Speech input and output device for personal computers. Includes: microphone, speaker, power supply and I/O plug. *MIMTALK* and *MIMHEAR* software available. **Price:** From \$169.00 **Producer:** Mimic, Inc.

MusicSystem

Software/hardware package for the Apple II. Has 16 voices, stereo output and polyphonic, multivoice chords. Can be used to teach music theory. **Price:** \$395.00 **Producer:** Mountain Computer, Inc.

Soundchaser® Computer Music System

Music synthesizer boards and keyboard for

the Apple II and Apple II + . Components sold separately or as a system. **Price:** From \$350.00 **Producer:** Passport Designs Inc.

Supertalker SD200

Lets Apple II user record phrases for later use in computerized lessons. Includes Supertalker card, loudspeaker and microphone. Language arts and foreign language software available. Price: \$199.00 Producer: Mountain Computer, Inc.

Talkware

Hardware/software vocabulary package for the Apple II. Includes voice synthesizer, sight-word acquisition software and support materials. **Price:** \$199.95 **Producer:** Courseware Associates Inc.

TI Solid State Speech™ Synthesizer

Gives the TI microcomputer speech production capability. Requires the Terminal Emulator II Command Module. **Price:** \$149.95 **Producer:** Texas Instruments, Inc., Personal Computer Division.

Type-'N-Talk™

Text-to-speech synthesizer with unlimited vocabulary. Needs RS-232C interface. Includes power supply and demo disk. **Price:** \$375.00 **Producer:** Votrax Div. of Federal Screw Works, Inc.

VERT 6000

Microcomputer-based talking unit for blind people creates full word, unlimited English speech. System can be tailored to user's needs. Runs on virtually any computer system with computer terminals. **Price:** \$5900.00 **Producer:** Automated Functions, Inc.

Supplies

CK-90

Cleans most information processing equipment. Removes debris from typewriter elements, recording heads, guides, capstans, tape paths and other components of magnetic recording equipment. **Price:** * **Producer:** 3M Data Recording Products.

Datalife 5¹/₄-in. and 8-in. Flexible Disks

Available in all combinations of single and double sided and single and double density. Reinforced covering standard on 5½-in. disks and optional on 8-in. disks. Packaged in boxes of ten disks. **Price:** From \$2.70 **Producer:** Verbatim Corp.

Datalife Head Cleaning Kit

Available for both 8-in. and 51/4-in. singleor dual-headed disk drives. Includes two

IT'S TIME KIDS STARTED USING STRONG LANGUAGE.



We encourage it.

Because now the most powerful educational language is available on the Apple Personal Computer.

Presenting Apple Logo.

It's not just a programming language for computers, but a learning language for people.

Enough so that anyone, working with Apple Logo, can easily learn the programming principles once reserved for college courses.

Apple Logo encourages you to break problems into small steps, and then shows you how to make those steps automatic. It does all this interactively. For instance, if you accidentally

type "foreword," instead of forward, Apple Logo responds with "I don't

know how to foreword."

There is no such thing as a mistake with Apple Logo, only logical statements telling you what needs to be done to make the program work. So the student programs the computer. Not the computer the student.

And as you learn, Apple Logo learns with you. So whether you're a student of 5 or 55, you'll always be challenged—but not overwhelmed.

Apple Logo runs on the Apple II with 64K. And it comes from Apple the leading personal

Apple, the leading personal computer company in education—with the largest library of courseware at all levels.

Apple Logo. It can make getting to know a computer the most positive of learning experiences.

Your kids will swear by it.





The personal computer.

For more information, call (800) 538-9696. In California, call (800) 662-9238. Or write: Apple Computer Inc., 20525 Mariani Avenue, Cupertino, CA 95014. Apple Logo is a product of Logo Computer Systems, Inc., 222 Brunswick Boulevard, Point-Claire, Quebec, Canada H9R1A6.

1 HARDWARE supplies

head cleaning disks. Extra disks available at additional cost. **Price:** \$12.50 **Producer:** Verbatim Corp.

Micro-Trac™ Cassettes

Fully guaranteed computer cassette tapes. Toll-free number for orders. **Price:** From \$.59 **Producer:** Micro-80 Inc.

Precision Magnetic Media

Line of 51/4-in. and 8-in. data and alignment disks, data and alignment disk packs and cartridges, and single rigid disks. **Price:** * **Producer:** Dysan Corp.

Scotch Diskettes from 3M

Single- and double-density disks for storage and retrieval of data. Available in 51/4- and 8-in. formats for both single- and dualheaded drives and in both single- and double-sided versions. **Price:** * **Producer:** 3M Data Recording Products.

Scotch Head Cleaning Diskettes

Cleans the read/write heads on drives in 30 seconds. Available for most 8-in. and 5½-in. drives. **Price:** * **Producer:** 3M Data Recording Products.

Verbatim Alignment Disks

Available in 5¼-in. and 8-in. sizes, single or double density. **Price:** From \$25.00 **Producer:** Verbatim Corp.

Verbatim Cassettes

Range of cassettes including standard digital type, general-use cassettes, no leader type, MFE, word processing tapes and mini-cassettes. **Price:** From \$7.00 **Producer:** Verbatim Corp.

Verbatim 1/4-in. Data Cartridges

Used in computers for backup storage. Tape lengths from 300 to 450 feet. **Price:** From \$23.00 **Producer:** Verbatim Corp.

Systems

A/V Library Circulation System

Complete hardware/software system for

automating library or audiovisual center ciculation systems. Covers reservations bookings, confirmations and shippin forms. All forms and support material available. **Price:** \$24,860.00 **Producer** AMMS Company, Research Technolog. International.

CCC-17 Instructional Computer System

Minicomputer-based system designed for education. Can network up to 96 terminals. Full reading, language arts and math curricula available separately. First year inservice training provided free. Toll-free service hotline. **Price:** From \$27,100.00 **Producer:** Computer Curriculum Corp.

Duxbury Braille Translation System

Produces properly contracted Grade II Braille from either a standard or a speech terminal. **Price:** \$9850.00 **Producer:** Duxbury Systems, Inc.

FERD II Color Computer

Developed for education. Uses voice, color, animation and graphics. Choice of three keyboards, including an alphabetized one for early education. Support hotline. Over 50 lessons and diagnostics available. **Price:** \$399.00 **Producer:** Mech Mentor.

Kurzweil Reading Machine

Self-contained hardware/software system translates print into speech for the visually impaired. Uses optical character reader and voice synthesizer. Two-day training workshop. Support materials in print and Braille. **Price:** \$29,800.00 **Producer:** Kurzweil Computer Products.

PLATO Computer-Based Education System

Complete curricula in reading, math and language arts plus high school social studies and science run on Control Data 110 microcomputers or terminals. Necessary CDC peripherals available. Price: * Producer: Control Data Corporation.

VersaBraille System

Portable Braille information and word processing system features logical storage and retrieval of Braille on cassette tape. Interfaces with Apple II and includes Grade II Braille Translator. **Price:** From \$5995.00 **Producer:** Telesensory Systems, Inc.

Can Computers Help Kids Learn Basics? YOU BET THEY CAN!

BUT ...

Why use an expensive, **general purpose** microcomputer primarily for drill and practice? (Over 60% according to 1981 Magazine Survey)

WHEN ...

Centurion's low-cost, **special purpose** computers, **dedicated** specifically to the task of drill and practice in basic skills, can do the job more effectively for more children at far less cost!



Centurion's highly motivational digitor, alphator, and versator, computers have a proven track record of success in basic skill learning in nearly 80,000 U.S. classrooms today!

- Ten exciting models, priced from \$119.50 to \$359.50, including software!
- Hundreds of programs available in Math, Reading, Language Arts, Spelling, Science and Social Studies!
- No programming skill needed!
- Curriculum correlation!

Contact your local dealer or Centurion for free classroom evaluation.

What's Missing From This Picture?



Educational software and the Softalk family of magazines.

Softalk magazines take education seriously. That's why all our technical columns are tutorial in nature. Our subscribers have to do more than read—they have to learn.

SOFTALK—All about your Apple II and Apple III computers. Thirteen tutorial columns, plus The Schoolhouse Apple column about educational software. Free trial subscriptions available to Apple owners. \$24 individual subscription rate; special \$8 school and library rate. Monthly.

SOFTLINE—All about games for all microcomputers. Three tutorial columns (Apple graphics, Atari sound,

writing adventure games in Basic) plus a regular column by Sherwin Steffin of Edu-Ware Services, \$12 individual subscription rate; special \$8 school and library rate. Bimonthly.

SOFTALK: FOR THE IBM PERSONAL

COMPUTER—All about your IBM pc. Four tutorial columns plus periodic educational features and reviews. Free one-year subscriptions to pc owners. \$24 individual subscription rate; special \$8 school and library rate. Monthly.

11021 Magnolia Boulevard Box 60 Dept. M PUBLISHING IN (. North Hollywood, CA 91603

Computer serial number must accompany requests for free subscriptions.

Two questions pop up whenever educators talk about software: "What's available?" and "Is it any good?"

The first question is a snap to answer. Just skim the following listings. You'll find more than 1,000 software offerings spanning every subject and grade. More and more become available every day.

The second question is another matter. It depends upon your philosophy of education and how you believe computers should be used. To a large degree, quality is in the eye of the beholder.

The best person to judge software is the classroom teacher who'll use it. Properly used, computers are tools that extend the capabilities of the teacher. Just as a carpenter works best with familiar and comfortable tools, so does a teacher.

Unfortunately, many good teachers are still intimidated by computers. They tend to suspend the keen professional judgment that they would apply to a new textbook, learning kit, or film. The truth is that the computer is simply another medium. A medium with incredible potential, but it has its strengths and weaknesses; its proper and improper uses.

The first recommendation that we would make about software evaluation is to forget about the mystique of the computer. Bring to the task your judgment and competence as an educator. That done, you should ask three basic questions:

1) Does the program fit the needs of your curriculum? Is it appropriate from the point of view of subject matter and grade level?

2) Is it educationally sound?

Does the software help establish or support an effective and affirmative learning experience for the user?

3) Is it easy to use?

Does the software work as it is supposed to? Are the manuals easy to read and comprehensive? Can the teacher and student use the software with minimal frustration and extraneous effort?

Each of these larger questions, of course, encompasses a multitude of smaller questions. But they're the same questions that you would ask when you evaluate other educational materials.

This leaves one small problem. How do you get to see software that you want to evaluate? Many of the periodicals listed in the publications section of this directory review software, and such reviews can guide you in the right direction. But there's no substitute for seeing it with your own eyes.

Many companies are reluctant to send free review packages because of unauthorized copying and distribution of copyrighted software. Copyright abuse is a major problem. Otherwise well-meaning educators who would be outraged if they caught their own students stealing, somehow have not equated unauthorized copying and sharing with stealing—which it is. Because of this problem, software prices are higher than they need to be and many major publishers have chosen to limit their investment in software development and marketing.

But there are ways that you can preview a wide selection of the software. Providing geography is not a problem, distributors will demonstrate software for you if you ask, either on your premises or theirs. Hundreds of educational computing conferences also provide outstanding opportunities to see the latest releases. Visiting other schools and districts is still another way to broaden your exposure. And many teacher centers, instructional resource centers, colleges, universities, and regional educational collaboratives are building up software libraries. (If your school or district doesn't belong to a regional educational computing collaborative, find out why. If you don't have such an organization in your area, why not start one?)

Clearly, it's well worthwhile to preview as broad a range of software as you can. The more you've seen, the better your ability to select wisely.

To compile this directory, every possible effort was made to find every software product available for use in classrooms. The listings that follow reflect what was on the market as of August 1982 when this directory went to press. New educational software is emerging at an impressive rate. If you don't find exactly what you want in the listings, write to the publishers and producers (you'll find their addresses in the *Companies* section). They may very well have new materials that fit your needs.

The prices listed below are the publisher's suggested retail price. They should be regarded as indicators only. Where both disk and cassette formats are available, prices are for the disk version. Machine requirement codes are explained in the boxes reproduced throughout the listings.

Art and Music

Apple Music Theory

Teaches music fundamentals. User hears and sees music while repeating and practicing lessons. Available for: APII.48.D Grades: 3 + Price: \$50.00 Producer: Apple Computer, Inc.

Arnold

Designed to teach tone recognition and melodic memory skills at five levels of difficulty. Requires DAC Board. **Available for:** APII.48.D* **Grades:** 4+ **Price:** \$210.00 **Producer:** Computer Courseware Services, Div. EMC Publishing.

Banjo Teacher

One in series of programs using graphic displays of 118 chords to teach a musical instrument. User can add, delete or change chords, and alter timing. Others in series: *Guitar, Mandolin* and *Ukulele Teacher*. **Available for:** RSI/RSIII **Grades:** 3-12 **Price:** \$9.95/ea. **Producer:** En-Joy Computer Programs.

Chord Mania

Provides practice of chords, including recognition of four-voice chords in any combination of chord qualities and inversions. Requires DAC Board. Available for: APII.48.D* Grades: 7 + Price: \$120.00 Producer: Computer Courseware Services, Div. EMC Publishing.

The Complete Graphics System II

Two- and three-dimensional graphics design package for non-programmers. User can design character sets, assemble, rotate and edit 3-D objects, create screen images with lines, circles, ellipses and 108 colors. **Available for:** APII + .48.D **Grades:** 8-12 **Price:** From \$69.95 **Producer:** Penguin Software.

Computer Music Box

User can enter, play, edit and save threepart music. Features automatic chord creation. **Available for:** TIA.16.C/D **Grades:** 6+ **Price:** \$19.95 **Producer:** Texas Instruments, Inc., Personal Computer Div.

The Creativity Tool Box

Contains several programs that let user create music, poetry, sound effects, graphics

and typefaces. Individual programs sold separately. **Available for:** APII.48.D **Grades:** 1 + **Price:** \$44.95 **Producer:** Avant-Garde Creations.

Doremi

User identifies the individual degrees of a major scale using scale degree or solfeggio responses. Requires DAC Board. Available for: APII.48.D* Grades: 4+ Price: \$110.00 Producer: Computer Courseware Services, Div. EMC Publishing.

Elements of Music

Drill and practice for children and nonmusic majors. Lessons include *Pitch Names*, *Pitches on the Keyboard* and *Key Signatures*. Recordkeeping options. **Available for:** APII + .48.D **Grades:** 5-12 **Price:** \$125.00 **Producer:** Electronic Courseware Systems, Inc.

Grid to Design Pictures

User draws on computer-generated grid. Computer presents code for finished drawing. **Available for:** TIA.C/D **Price:** \$9.95 **Producer:** Microcomputers Corp.

Hello, I'm Music

Two disks drill the staff, note and rest symbols, accidentals and bar lines, melody, rhythm, harmony, form. Requires DAC Board. Available for: APII.48.D* Grades: 3-9 Price: \$190.00 Producer: Computer Courseware Services, Div. EMC Publishing.

Ibis

Automated painting software designed to mimic traditional drawing environment of pen and tablet. Includes 64-color palette, 32 pen weights, digital templates, electronic erasing. Requires no knowledge of computers. Available for: * Grades: 6-12 Price: \$11,200.00 Producer: Morgan-Fairfield Graphics.

Interval Drillmaster

Provides practice in identifying and notating simple melodic intervals. Includes diagnostic, self-evaluation and recordkeeping facilities. Available for: APII.48.D Grades: 9+ Price: \$75.00 Producer: CONDUIT.

Interval Mania

Uses game format to drill melodic and harmonic intervals. For one or two players.

Requires DAC Board. Available for: APII.48.D* Grades: 4+ Price: \$210.00 Producer: Computer Courseware Services, Div. EMC Publishing.

MC Painting

One-key commands create multicolor, low-resolution graphics using 15 colors. Available for: APII.32.D Grades: 8+ Price: \$24.95 Producer: Teck Associates.

Melodious Dictator, Rhythmic Dictator and Harmonious Dictator

Three programs use game formats and graphics to teach melody, rhythm and harmony. *Melodious Dictator* also appropriate for grade school students. Require DAC Board. **Available for:** APII.48.D* **Grades:** 7 + **Price:** \$210.00/ea. **Producer:** Computer Courseware Services, Div. EMC Publishing.

Mode, Key Signature, Rhythm and Pitch Drills

Five multiprogram disks containing drills and games. Two pitch programs: Pitch With Accidentals and Pitch Without Accidentals.

EQUIPMENT CODES

Example: Available for: APII.48.D

Machine codes used:	
Apple I	API
Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
Minimum internal memory:	
4K bytes	4

Minimum internal memory: 4K bytes 4 8K bytes 8 16K bytes 16 etc.

Minimum peripherals needed: Cassette player Disk drive

Contact producer

D

art and music

Require DAC Board. Available for: APII.48.D* Grades: 4+ Price: \$121.00/ea. Producer: Computer Courseware Services, Div. EMC Publishing.

Music

Four music exercises teach treble clef lines and spaces, musical pitch, matching rhythms and matching equivalent notes. Available for: PET.8.C/D Grades: 4 + Price: \$7.95/ea. Producer: Micro-Ed, Inc.

Music Composer

Will compose, play and display up to four voices simultaneously. User can edit and save compositions. Requires DAC Board. Available for: APII.48.D* Grades: 7+ Price: \$190.00 Producer: Computer Courseware Services, Div. EMC Publishing.

Music Composer™

Programming cartridge lets ATARI users compose music. Program plays melody and displays notes on screen simultaneously. User can save music on disk or cassette. Requires ATARI 410™ Program Recorder or ATARI 810™ Disk Drive. Available for: AT4/AT8.8* Grades: 4+ Price: \$39.95 Producer: ATARI, Inc., Home Computer Div.

Music Lover's Guides

Five disks cover composers, musical symbols, musical instruments, general music terms and a special teacher's program that allows teacher to enter own information in the *Music Lover's* format. Require DAC Board. Available for: APII.48.D* Grades: 4 + Price: \$99.00/ea. Producer: Computer Courseware Services, Div. EMC Publishing.

Music Maker

Music composition module lets user arrange notes on an electronic musical staff. Data storage system recommended. Available for: TIA.16.* Grades: 5 + Price: \$39.95 Producer: Texas Instruments, Inc., Personal Computer Div.

* = Contact producer or distributor

Music Reading

Individually paced program builds sight reading skills. Available for: RSI/RSIII.C/D Grades: 5 + Price: \$11.95 Producer: Cove View Press.

Music Skills Trainer

Four drills — pitch guess, interval recognition, chord recognition and phrase recall — test musical ability and reinforce skills. Available for: TIA.16.C/D Grades: 6+Price: \$29.95 Producer: Texas Instruments, Inc., Personal Computer Div.

MusicMaster TM

Series of interactive programs provides training in basic musicianship. Facilitates teacher management and student performance analysis. Requires alphaSyntauri™ Synthesizer. Available for: APII/APII+.48.D*Grades: 6+ Price: \$150.00 Producer: Syntauri Corp.

Name That Tune

Uses familiar tunes and game context to teach identification by sound of the degrees of the scale. Requires Integer ROM Language Card and DAC Board. **Available for:** APII.48.D* **Grades:** 4+ **Price:** \$110.00 **Producer:** Computer Courseware Services, Div. EMC Publishing.

Notewriter® and MusicTutor™

Composing and ear training programs for use with the Soundchaser® Music Synthesizer. Available for: APII+.48.D* Grades: 7+ Price: From \$99.00 Producer: Passport Designs Inc.

Paint

Students create paintings on the compuscreen and save them on disk for later cplay. Package developed by Capital Cldren's Museum includes disk and book tcover suggested activities, art listings, coputer graphics. Available for: AT8.48.1 Grades: K-12 Price: \$31.95 Produce Reston Publishing Co.

Sounds Trio TM

Program facilitates professional-lev sound creation, performance and recordin Included with alphaSyntauri™ Music Sy the sizer. Available for: API APII + .48.D* Grades: 6 + Price: \$100.0 Producer: Syntauri Corp.

U-Draw II

User manipulates and draws hi-res figure on the screen. Can expand, move or rota figure through keyboard commands, a through simple program commands. Avai able for: APII.32.D Grades: 6+ Price \$39.95 Producer: Muse Software.

Video Easel

Program cartridge lets user create pattern on screen using keyboard or joysticks. Op tions include: drawing, quad drawing, *Lif* (which expands drawing according to gam of *Life* mathematical principles). **Available for:** AT4/AT8.8.* **Grades:** 3 + **Price** \$34.95 **Producer:** ATARI, Inc., Home Computer Div.

Video Graphs

User creates own designs from preprogrammed graphics. Available for: TIA.16.* Grades: 2+ Price: \$19.95 Producer: Texas Instruments, Inc., Personal Computer Div.

Software: A note about reading these listings

The thousand-plus listings in the software section are arranged alphabetically within subject categories. Any discipline represented by four or more programs has a category. Large categories, such as Language Arts, have subcategories. If you don't find the program you're looking for within a Math or Language Arts subcategory, please check the listings under Other. The Other categories include programs which span several disciplines (i.e., Milliken's Math Sequences, which covers arithmetic prealgebra skills), as well as those in unusual subject areas. The general Other Software listings at the end of this section also include both programs that span several disciplines and those which do not coincide with one of the specific subject headings. Prices are for the disk version of the program when both disk and cassette versions are available.

Computer Literacy

Basic BASIC

Teaches BASIC. Quiz, grading system and teacher's guide included. Available for: RSI/RSIII.C/D Grades: 3 + Price: \$30.00 Producer: Concept Educational Software.

Basic Programming for the Apple

Program adapted from book BASIC Programming for the Apple II. Suitable for high school, college and adult education. Includes two disks and a manual. Available for: APIL 48.D Grades: 8+ Price: \$110.00 Producer: Science Software Systems, Inc

BASIC Programming Series

Three-part series takes students from beginning through advanced programming for TRS-80 computers. Each part includes

EQUIPMENT CODES

Example:

Available for: APII.48.D	
Machine codes used:	
Apple I	API
Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
341.	
Minimum internal memory:	
4K bytes	4
8K bytes	8
16K bytes	16
etc.	

Minimum peripherals needed:

D

Cassette player

Contact producer

Disk drive

teacher's manual, transparencies and student workbooks. Available for: RSI/RSIII Grades: 6+ Price: From \$159.00 Producer: Radio Shack.

The BASIC Teacher

Thirteen lessons with tests and review sections help students learn Integer BASIC. Covers all BASIC programming concepts. Available for: APII.32.D Grades: 5+ Price: \$34.95 Producer: Charles Mann and Associates, Microsoftware Div.

BASIC Tutor Series

Series of nine disks designed to teach Applesoft BASIC. Documentation provided if requested. Sold individually or as a set. Available for: APII.48.D Grades: 7+ Price: \$250.00/set Producer: Educational Courseware.

Bugbyter

Debugging program for 6502 machine language. Useful in teaching Assembly language programming because it displays all registers and has single step and trace features. Includes documentation manual. Available for: APII/APII + .48.D Grades: 10 + Price: \$39.95 Producer: Computer-Advanced Ideas Inc.

Computer Awareness

Combines audiovisual and computer instruction to teach about the computer, its function and its impact on everyday life. Includes four sound filmstrips, two disks, worksheets and teacher's guide. Available for: APII + .32.D, RSI/RSIII.32.D Grades: 4-7 Price: \$195.00 Producer: Society for Visual Education, Inc., The Singer Company.

Computer Discovery

Workbook and software teach computer literacy. Instructor's guide with exercises, project suggestions and resource listings helps teacher develop more extensive curriculum. Available for: Most Grades: 6-12 Price: \$190.00 Producer: SRA, Science Research Associates, Inc.

Computer Literacy Series

Series of 10 disks accompanied by student response booklets. Relates explanations of the computer to student's everyday life. Reviews hardware, programming languages, binary system and flowcharts. For Grade 5-6 reading level. Available for:

APII.32.D. RSIII.32.D. RSI.32.C Grades: 5-12 Price: \$29.95/ea. Producer: Media Materials, Inc.

Computer Power: A First Course in Using the Computer

Seven-disk program provides an 18-week computer literacy course. Teaches average students to program. Includes student textbook and teacher's manual. Available for: APII.48.D Grades: 9+ Price: * Producer: McGraw-Hill Book Company, Gregg/McGraw-Hill.

Computing Language Assembler Editor

Lets user program an ATARI in Assembly language. Shows how each instruction affects memory and processor's registers. Requires ATARI 410TM Program Recorder. Available for: AT4/AT8.8.C* Grades: 10+ Price: \$59.95 Producer: ATARI, Inc., Home Computer Div.

The Electronic Tool

A nontechnical, interactive, graphic tutorial on how computers perform common operations in business, home and school. Available for: APII + .32.D Grades: 7+ Price: \$34.95 Producer: Micro Power & Light Co.

The Floating Point Dictionary

Presents BASIC commands, then definitions and examples of their use. Practice test programs also given. Keyed to Charles Mann's programming software, The Teacher Plus or The BASIC Teacher. Available for: APII.48.D Grades: 5+ Price: \$29.95 Producer: Charles Mann and Associates, Microsoftware Div.

Hoffman Computer Literacy

Provides hands-on computer literacy exposure and practice. Covers computer history, applications, organization and simple programming. Available for: APII + Grades: 1-12 Price: * Producer: Hoffman Educational Systems.

How To Program in BASIC

Tutorials on disk or cassette parallel chapters in the workbook series, Hands On Microcomputer Workbooks. Covers beginning BASIC through subroutines and graphics. Available for: Most.C/D Grades: 6+ Price: \$69.00 Producer: Sterling Swift Publishing Co.

computer literacy

How to Operate the Apple II

Three audio cassettes teach first-time users how to operate the computer. Requires no technical knowledge. Uses Apple's own system disk for program demonstration. Includes operator's guide. **Available for:** APII + .D* **Grades:** 7 + **Price:** \$49.95 **Producer:** Mosaic Media, Inc.

How to Use Your Apple II Micro-Computer

Covers basic hardware and software concepts, how computers operate, how to load and run programs, how to create, save and debug simple BASIC programs and how to care for disks. Adapts to individual learning styles. Optional audio tape. Available for: APII + .48.D* Grades: 6-12 Price: \$120.00 Producer: Courseware. Inc.

Introduction to Computers

Four filmstrips and two disks on computer literacy. Covers hardware, software, programming, economic and sociological impact of computers. Reproducible skill sheets included. Available for: APII+.32.D, RSII.D, * Grades: 7+ Price: \$205.00 Producer: Society for Visual Education, Inc., The Singer Company.

Introduction to Microcomputers

Six-game program introduces the computer and teaches simple computer terminology, parts of the computer and keyboarding. Available for: APII+.32.D, RSIII.32.D, PET.8.C Grades: 3-6 Price: \$47.49 Producer: McGraw-Hill Book Co., Webster/McGraw-Hill Div.

Introduction to Programming with CCC BASIC

A self-paced tutorial course includes demo programs, tutorial exercises, student guide and teacher's handbook. For CCC mini- and microcomputers. **Available for:** * **Grades:** 7 + **Price:** * **Producer:** Computer Curriculum Corp.

An Invitation to Programming 1, 2 and 3

Three multilesson programs teach ATARI BASIC programming. Cover fundamentals of programming through sound, music and

graphics. Require ATARI 410[™] Program Recorder. Available for: AT4/AT8.8.C* Grades: 5 + Price: From \$24.95 Producer: ATARI, Inc., Home Computer Div.

Kidstuff

Computer language uses turtle graphics to present programming concepts. Provides foundation for learning BASIC, positive and negative numbers, directionality and decimals. Two versions, 8K and 16K-enhanced, on one tape. Available for: PET.8.C, PET.16.C/D Grades: 2-12 Price: \$75.00 Producer: Kidstuff.

Micro Discovery

Six-week computer literacy course uses text and disks. Includes programs to be used as part of social studies, language arts or science curriculum. Available for: APII.48.D Grades: 4-8 Price: \$190.00 Producer: SRA, Science Research Associates, Inc.

The New Step by Step I and II

Two courses, each consisting of a workbook, disks and audio cassettes, teach BA-SIC programming. Computer displays sample programs. The cassette explains them. Student solves related problems and uses the workbook for review. Available for: APII.48.D Grades: 9 + Price: \$79.95/ea. Producer: Program Design, Inc.

The Programmable Cube

Uses the popular cube games to teach programming. Specially designed programming language lets student design programs to make fancy patterns or even to solve a scrambled cube. Hi-res graphics show cube in motion. **Available for:** APII/APII+.48.D **Grades:** 4+ **Price:** \$34.95 **Producer:** Metacomet Software.

Rocky's Boots

In an arcade-like setting, players build point-scoring logic machines using conventional logic symbols for AND, OR and NOT. While building, they learn about computer circuits. Requires Autostart ROM. Available for: APII + .48.D* Grades: 4 + Price: \$75.00 Producer: The Learning Company.

Simulated Computer

Allows user to program a small machinelanguage computer and see every step of the computer's operation on the screen. **Available for:** Most.16.C/D **Grades:** 9-12 **Price:** \$19.95 **Producer:** Edu-Soft, Steketee Educational Software.

Star Thrower

Players maneuver spacemen to win a starthrowing game. On-screen tutorial teaches them to program their spacemen with competitive strategies. **Available for:** Most.48.D* **Grades:** 1-5 **Price:** \$44.95 **Producer:** Spinnaker Software Corp.

Step by Step

Thirty-two programs and a 64-page workbook teach BASIC programming. Interactive question-and-answer lesson format. **Available for:** RSI/RSIII.C **Grades:** 7+ **Price:** \$49.95 **Producer:** Aquarius Publishers, Inc.

Teach Your Students Programming

A 33-program course that includes two disks, an audio cassette and a workbook. The audio cassette supplies voice instruction as the computer illustrates BASIC programming concepts. Available for: APII.D Grades: 4-12 Price: \$79.95 Producer: Aquarius Publishers, Inc.

Teach Yourself BASIC

BASIC programming lessons cover simple commands to color graphics and sound. Available for: TIA.16.C/D Grades: 4 + Price: \$34.95 Producer: Texas Instruments, Inc., Personal Computer Div.

Teach Yourself Extended BASIC

Seven-chapter tutorial. Requires Extended BASIC. Available for: TIA.16.C/D Grades: 6-12 Price: \$24.95 Producer: Texas Instruments, Inc., Personal Computer Div.

The Teacher Plus

Eighteen lessons cover Applesoft BASIC. Works in conjunction with Apple manual. Available for: APII.48.D Grades: 5+Price: \$39.95 Producer: Charles Mann and Associates, Microsoftware Div.

Turtle

Helps students learn Pascal turtle graphics commands by creating their own drawings. As student types each statement, the turtle performs the appropriate action on the screen. Available for: APII.64.D* Grades: 7-12 Price: \$29.95 Producer: Edu-Soft, Steketee Educational Software.

Understanding Computers

Interactive computer literacy program on four disks. Has workbooks, computer-based activities and teacher's guide. Available for: APII+.D Grades: 6+ Price: \$266.00 Producer: Encyclopaedia Britannica Educational Corp.

The Logo Language is Here It's the Learning Language

TO SQUIRAL : ANGLE : DISTANCE IF : DISTANCE > 200 THEN STOP FORWARD : DISTANCE RIGHT : ANGLE SQUIRAL : ANGLE : DISTANCE + 3 END

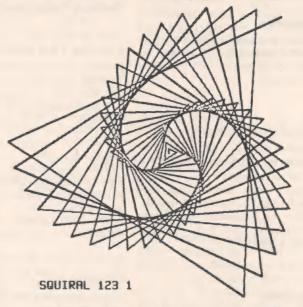
Terrapin, the Turtle Company, brings you the Terrapin Logo Language for the Apple II with Turtle graphics, now ready for immediate

The Terrapin Logo language is for students and teachers at every level. It was carefully designed by professional educators and artificial intelligence researchers to promote structured, logical thinking. It encourages exploration and experimentation, helping students to take an active role in the learning process. The language is so easy to use that it quickly overcomes fear of the computer. Simple graphics commands make using the computer fun and exciting for young children.

But it doesn't stop there. Children won't outgrow the Terrapin Logo language. It grows with them. The Logo language includes many features common to artificial intelligence research languages permitting programs of great power to be written quickly and easily. Writing comparable programs in other languages is usually much more difficult and

time consuming.

The Terrapin Logo language was developed by the Artificial Intelligence lab at the Massachusetts Institute of Technology. Terrapin is now authorized by MIT to distribute the results of its 12 years of research to you. To provide quality support for the language, Terrapin has assembled a team that includes two of the three authors who developed the Logo language for the Apple II at MIT.



Dr. Wally Feurzeig, an originator of the Logo language, Dr. Sylvia Weir, Dr. Nancy Roberts, and Dr. Paul Goldenberg, who have been involved with the Logo project for many years, think the Terrapin Logo language is so good that they have joined Terrapin's Board of Educational Directors.

Every copy of the Terrapin Logo language comes with complete documentation. To run the language, a 48K Apple II with a 16K RAM card or a language card, and one disk drive is required.

Terrapin also offers the robot Turtle, and the following books: Turtle Geometry, Special Technology for Special Children, Mindstorms, Katie & the Computer, and Logo for the Apple II from Byte Books.

Suggested retail price: \$149.95 To order or for more information, call or write:



Terrapin, Inc. 380 Green Street Cambridge, MA 02139 (617) 492-8816

SES Computing, Inc. 366 Adelaide Street East Toronto, Ontario M5A3X9 (416) 366-4242

Dealer Inquiries invited.

Early Education

ABC Sequence

Teaches the sequence of the alphabet. **Available for:** RSI/RSIII.16.C **Grades:** K-1 **Price:** \$10.95 **Producer:** Little Bee Educational Programs.

Alphabet, Guess the Number and Reverse

Three games. Alphabet plays the alphabet song as the child presses the keys. Large letters appear in color. See math listings for Guess the Number and Reverse. Available for: APII+.16.D Grades: 1-6 Price: \$19.95 Producer: Edu-Soft, Steketee Educational Software.

Alphabet Song

The computer plays the alphabet song as capital letters appear on the screen. When the song stops, the child pushes the next letter for the song to continue. Available for: PET.8.C Grades: PreK-K Price: \$9.95 Producer: Micrograms Inc.

Alphablocks

Child matches lowercase letters to large uppercase letters displayed on the screen. Available for: PET.8.C Grades: K-l Price: \$9.95 Producer: Micrograms Inc.

AlphaKey™

Familiarizes children with keyboard and alphabet. Available for: RSIII.16 Grades: PreK-1 Price: \$39.95 Producer: Radio Shack.

Aquarium

Games in which students manipulate fish in an aquarium. Include color graphics and user's manual. **Available for:** APII.48.D **Grades:** 1-5 **Price:** \$25.00 **Producer:** Micro Learningware.

Beginning Sounds

By pressing the space bar, the child selects the letter that identifies the beginning sound of the pictured object. Available for: PET.16.C Grades: K Price: \$9.95 Producer: Micrograms Inc.

Calendar

Drill-and-practice program for reviewing the days of the week, the months of the year, abbreviations for months and matching months with seasons. Dates of holidays and seasons are included. **Available for:** APII + .48.D **Grades:** 2-5 **Price:** \$29.95 **Producer:** Hartley Courseware, Inc.

Calendar Tic-Tac-Toe

Provides drill on the order of the days of the week and the months of the year. **Available for:** RSI/RSIII.16.C **Grades:** K-4 **Price:** \$15.95 **Producer:** Little Bee Educational Programs.

Clock

Teaches children to tell time with both digital and standard clocks. Teacher can create and modify lessons. Available for: APII+.48.D Grades: 1-5 Price: \$39.95 Producer: Hartley Courseware, Inc.

Counting Bee

Hi-res graphics used to teach counting, addition, subtraction, shape recognition, and weights and measures. Documentation included. Available for: APII/

EQUIPMENT CODES

API

Example:

Available for: APII.48.D

Machine codes used: Apple I

Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
Balling intermed management	

Minimum internal memory:

4K bytes	4
8K bytes	8
16K bytes	16
etc.	

Minimum peripherals needed:

Cassette player Disk drive	D
Contact producer	

APII + .48.D Grades: PreK-1 Pric \$29.95 Producer: Edu-Ware Services, In

Counting Through Twenty

Counting game uses graphics to teach nur bers from one to twenty. Available fo PET.16.C Grades: 1 Price: \$9.95 Producer: Micrograms Inc.

Early Elementary I and II

Two series of four programs each designe to teach color, number and shape recogn tion, and counting skills. Include a teach management file that tracks student progress. Version for Votrax speech syrthesizer available for \$34.95. Available for: APII.48.D Grades: PreK-2 Price \$29.95 Producer: Compu-Tations Inc.

Early Learning Fun

Program module teaches shape, number an letter recognition, counting, sorting and first computer skills. Available for TIA.16.* Grades: PreK-1 Price: \$29.9: Producer: Texas Instruments, Inc., Per sonal Computer Div.

Educator's Disk Special

A group of 14 programs on one disk, including math games, language arts and reading programs, a time-guessing game and a game to help develop problem-solving strategies. Available for: APII.32.D Grades: K-5 Price: \$19.95 Producer: Teck Associates.

Elementary — Volume 7

Nine-part disk uses games to teach letter recognition, alphabetical order, grouping and addition. Program is self-correcting, uses graphics and keeps score. Includes teacher's manual. Available for: APII.32.D Grades: K-2 Price: \$36.00 Producer: Minnesota Educational Computing Consortium (MECC).

Face Maker

Computer presents blank face that the child can complete by selecting from menus of eyes, ears, hair, etc. Completed faces can be named and saved. The child can also animate a face. **Available for:** Most.48.D* **Grades:** K-3 **Price:** \$39.95 **Producer:** Spinnaker Software Corp.

Family Fun

Disk of 10 programs for pre-schoolers through second grade or for remedial work in Grades 1 and 2. **Available for:** APII.32.D **Grades:** PreK-5 **Price:** \$19.95 **Producer:** Teck Associates.

Gertrude's Secrets and Gertrude's Puzzles

Use Gertrude the Goose to teach early logic and problem-solving skills through puzzle solving. Children without computers can play along using manipulatives. Joystick and sound options. Secrets for K-3. Puzzles, 3-6. Available for: APII/APII+.48.D. Grades: K-6 Price: \$75.00/ea. Producer: The Learning Company.

Hickory Dickory Clock

Children identify times displayed on a clock face. Time intervals of one hour, ½ hour, ¼ hour or five minutes. Available for: PET.8.C Grades: 1-3 Price: \$9.95 Producer: Micrograms Inc.

Hodge Podge

Program teaches the alphabet using graphics and sound. Teacher's manual. **Available for:** APII.48.C/D **Grades:** PreK-2 **Price:** \$18.95 **Producer:** Dynacomp, Inc.

Hour Clock, ½ Hour Clock, and ¼ Hour Clock

Three programs teach skills of telling time.

Tutorial Courseware



BLS Courseware adapts to the learner, with branching back or ahead after each student response. There are BLS Tutor Courses® for math, reading, and language arts at the elementary levels. At advanced levels, there are math, English, science, and vocational programs. All are validated and compatible with Apple* systems. Send for this catalog.

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00038-1) a	nd Price List (68639-X)
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School	
Address	
City/State/Zip	

Digital and clock faces used. Game-like. Available for: RSI/RSIII.16 Grades: 1-3 Price: \$29.80/ea. Producer: Bertamax, Inc., Micro School Programs.

Jeep Jamboree

Counting game uses graphics to teach numbers from one to ten. Available for: PET.8.C Grades: K Price: \$9.95 Producer: Micrograms Inc.

Juggles' Rainbow

Program uses graphics of animated jugglers, rainbow, butterfly and windmill to reinforce spatial concepts and pattern recognition. Sound optional. **Available for:** APII/APII+.48.D **Grades:** PreK-1 **Price:** \$45.00 **Producer:** The Learning Company.

Kid Ventures

Three programs based on *Little Red Riding Hood*, "'Twas the Night Before Christmas" and *Old MacDonald's Farm* introduce the stories and quiz children's comprehension. Optional audio tapes. **Available for:** RSI.16.C/D, RSIII.32.C/D **Grades:** Pre K-1 **Price:** From \$14.95 **Producer:** Adventure International.

Kindercomp

Introduces use of a computer with emphasis on early number and reading readiness skills. Requires joysticks. Available for: AT8.C/D* Grades: PreK-3 Price: \$19.95 Producer: Jadee Enterprises.

Letter Recognition

Presents easy-to-read letters and numbers. Student must find matches on the keyboard. The teacher can choose from: uppercase letters only, lowercase letters only, numerals (0-9) and mixed characters. Teacher's guide included. **Available for:** APII+.48.D **Grades:** K-1 **Price:** \$26.95 **Producer:** Hartley Courseware, Inc.

Letters and Numbers

Uses specially designed character set to drill letter and number recognition. Letters and numbers missed in one display appear again in the next. **Available for:** PET.8.C **Grades:** PreK-2 **Price:** \$24.95 **Producer:** Teaching Tools: Microcomputer Services.

Math 'Em I and II

Two programs for young children provide practice in recognizing numbers, letters and

Roman numerals. **Available for:** TIA.C/D **Grades:** PreK-1 **Price:** \$14.95 **Producer:** Microcomputers Corp.

Missing Letter

Provides drill in the sequence of the alphabet. **Available for:** RSI/RSIII.16.C **Grades:** K-1 **Price:** \$10.95 **Producer:** Little Bee Educational Programs.

Missing Numbers

Provides practice with number patterns. Available for: PET.8.C Grades: 1-2 Price: \$9.95 Producer: Micrograms Inc.

Moptown

Eleven attribute games designed around imaginary inhabitants of Moptown. User learns to discriminate between Bibbets and Gribbits who are tall or short, fat or thin, wear red or blue. Color graphics. One or two players. Sound optional. **Available for:** APII/APII + .48.D **Grades:** K-3 **Price:** \$50.00 **Producer:** Special Delivery Software, Apple Computer, Inc.

Random House Courseware



Available exclusively from Random House, more than two dozen quality programs in reading, language arts, and math. All listed in this 1982 Random House Courseware Catalog. Motivational instruction that works! Plus management programs to help take the drudgery out of teaching. Courseware is compatible with Apple* and TRS 80** systems. Send for your catalog today!

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Name	 	
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School		
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2 SOFTWARE early education

Mother Goose Rhymes

Allows a child in the early elementary grades to practice spelling and memorization. Besides Mother Goose rhymes, includes "'Twas The Night Before Christmas" and "Paul Revere's Ride." **Available for:** APII.D **Grades:** K-3 **Price:** \$24.95 **Producer:** George Earl.

Naming Numbers

The child counts objects on the screen and matches his/her answer with the numerals or word names shown. Available for: PET.8.C Grades: K-1 Price: \$9.95 Producer: Micrograms Inc.

Number/Numeral

Teaches number/numeral relationships and sequencing. Available for: RSI/RSIII.16.C Grades: K-1 Price: \$10.95 Producer: Little Bee Educational Programs.

Perception 3.0

Challenges visual judgment and sharpens hand-eye coordination. Seven games. Documentation included. **Available for:** APII/APII + .48.D **Grades:** PreK-3 **Price:** \$24.95 **Producer:** Edu-Ware Services, Inc.

PowWow

Logical deduction number game. Generates number that player tries to guess. **Available for:** TIA.C/D **Grades:** 3 + **Price:** \$14.95 **Producer:** Microcomputers Corp.

Preschool Fun

Teaches color, shape, number and letter discrimination. Available for: AT4/AT8.16.C Grades: K-1 Price: \$25.00 Producer: T.H.E.S.I.S.

Preschool IQ Builder 1 and 2

Two disks teach cognitive skills. Cover same/different, letters, symbol, number and word discrimination. Part 1 available for 32K Apple as well as for ATARI. Available for: AT.8.D Grades: PreK Price: \$23.95/ea. Producer: Program Design, Inc.

Programs for Young Learners

Eight programs: Facts Match, Number Match, Number Story Mix Series, Word Picture, Alphakey, Alpha Letter Drop and Match It. Teacher's manuals available. Programs priced individually. Available for: RSI/RSIII.16.C, APII.16.D Grades: 1-3 Price: From \$24.80 Producer: Bertamax, Inc., Micro School Programs.

Racing Letters

Fast-moving program that provides alphabetic and numeric teaching guide. Available for: TIA.C/D Grades: K-2 Price: \$9.95 Producer: Microcomputers Corp.

Reading Readiness: Visual Discrimination

Uses matching of randomly generated symbols and numbers to develop visual discrimination. **Available for:** APII + .32.D, RSI/RSIII.32.D **Grades:** PreK-1 **Price:** \$55.00 **Producer:** Computer Courseware Services, Div. EMC Publishing.

EQUIPMENT CODES

Example: Available for: APII.48.D

Machine codes used:	
Apple I	API
Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
Minimum internal memory:	

Minimum	internal memory:	
4K bytes		4
8K bytes		8
16K bytes		16
etc.		

Minimum peripherals needed: Cassette player Disk drive	C
Contact producer	•

Remembering Numbers and Letters

Builds recognition and retention of numbe and letters that are flashed on the scree Length of time for identification autmatically adjusts for student's performanc Available for: APII+.32.D, RS RSIII.32.D Grades: 1-6 Price: \$55.0 Producer: Computer Courseware Service Div. EMC Publishing.

Sammy The Sea Serpent

Uses voice, graphics, music, sound an game formats to involve young childre with the computer. **Available for** AT.16.D/C **Grades:** PreK-1 **Price:** \$23.9 **Producer:** Program Design, Inc.

Space Waste Race and Better View a Zoo

Two computerized storybooks with an imated graphics, music, sound effects Have five learning activities each, all o which use parts of the story displays. Cur rent score and over-all progress tracked Available for: RSI.16.C, RSIII.32. I Grades: PreK-2 Price: \$24.95/ea. Producer: Storybooks of the Future.

Spatial Relations

Teaches the relationships of up/down, in/ out, left/right, over/under, big/small, tall/ short, high/low. **Available for:** AT4/ AT8.16.C* **Grades:** K-1 **Price:** \$17.50 **Producer:** T.H.E.S.I.S.

Spatial Relationships

Teaches two-dimensional spatial relationships such as left/right and over/under. Available for: APII + .32.D, RSI/RSIII.32.D Grades: PreK-1 Price: \$55.00 Producer: Computer Courseware Services, Div. EMC Publishing.

Story Machine

The child creates sentences and paragraphs using a word list provided on a cue card. When the child is ready, the computer animates the sentence or paragraph using color graphics and sound. Available for: Most.48.D* Grades: K-4 Price: \$44.95 Producer: Spinnaker Software Corp.

Telling Time

Uses a clock face to teach telling time. **Available for:** APII + .32.D. RSI/

RSIII.32.D **Grades:** K-3 **Price:** \$55.00 **Producer:** Computer Courseware Services, Div. EMC Publishing.

Ten...10

Associates numerals with their names spelled in large type. Available for: PET.8.C Grades: 1 Price: \$9.95 Producer: Micrograms Inc.

Upper/Lower Case Matching

Reinforces relationship between lowercase and corresponding uppercase letters. Available for: RSI/RSIII.16.C Grades: K-1 Price: \$10.95 Producer: Little Bee Educational Programs.

Using a Calendar

Reviews basic calendar-reading skills, Multiple calendars with sequenced lessons included. Teacher can keep records and modify and create lessons. Available for: APII + .48.D Grades: K-4 Price: \$39.96 Producer: Hartley Courseware, Inc.

Which Two Are the Same?

Matching game asks child to compare target group of three letters with four other sets of letters to find the match. Available for: PET.8.C Grades: K Price: \$9.95 Producer: Micrograms Inc.

Language Arts

Adverbs

Students identify adverbs in example sentences. Program provides clues to recognizing adverbs and summarizes performance. Teacher may change sentences.

Available for: PET.8.C/D Grades: 4-8

Price: \$7.95 Producer: Teacher's PET Software.

Basic English

Program builds sentence diagramming and part-of-speech recognition skills. Includes teacher's guide. Available for: RSI/RSIII.C/D Grades: 4-12 Price: \$35.00 Producer: Concept Educational Software.

Beginning Grammar

The child must decide which of three given sentences contains an error in grammar. Available for: PET.16.C Grades: 2-3 Price: \$9.95 Producer: Micrograms Inc.

Beginning Grammar

Program module introduces the basic parts of speech and how they're used to build sentences. Available for: TIA.16.* Grades: 2-5 Price: \$29.95 Producer: Texas Instruments, Inc., Personal Computer Div.

Beginning Punctuation

Asks student to indicate which of three sentences contains an error in punctuation. Available for: PET.16.C Grades: 2-3 Price: \$9.95 Producer: Micrograms Inc.

Commas

Practice inserting commas in word series, introductory phrases, nonrestrictive clauses, parenthetical expressions and appositives. Available for: APII/APII+.32.C/D, PET.8.C Grades: 7-12 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Conjunctions

Tutorial in meaning and use of conjunctions. Student joins sentences using conjunctions. Game follows. Available for: APII/APII+.32.C/D, PET.8.C Grades: 5 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Correct Form of Commonly Used Verbs

Tutorial uses common verbs in sentences, explaining why the particular form is correct. Game follows. Available for: APII/APII+.32.C/D, PET.8.C Grades: 6 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Dragon Game Series for Language Arts

Game format allows student to review and practice parts of speech while moving along a game board. The student must correctly answer questions or end up in the dragon's den. **Available for:** APII.48.C/D, RSI/RSIII.32.C/D, PET.16.C/D **Grades:** 3-6 **Price:** \$49.00 **Producer:** Educational Activities, Inc.

End Marks

Correct use of period, question mark and exclamation mark. Students practice making corrections in sentences and paragraphs. Available for: APII/APII + .32.C/D, PET.8.C Grades: 7-12 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

English Basics

Reviews nouns, pronouns, verbs, adjectives, adverbs, homonyms, synonyms, antonyms and contractions. Focuses on single problems, displays textual materials and gives examples. **Available for:** APII.48.C/D, RSI/RSIII.32.C/D, PET.16.C/D **Grades:** 5-8 **Price:** * **Producer:** Educational Activities, Inc.

English Computorials I-V

Tutorials in basic English mechanics. Package includes 10 audio cassettes, five student disks, 10 data disks, one protector's disk and user's guide. Requires two disk drives and cassette player. Available for: APII.48.D* Grades: 9-12 Price: \$625.00 Producer: Educulture, Inc.

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Study Aids For College Board Exams (eq. PSAT, SAT or GRE)

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Verbal Skills Pak - Vocabulary, Word Analogy, and Sentence Completion. 3 Diskettes - \$60

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2 SOFTWARE language arts

English Usage Exercises

Three-volume series of 100 lessons each on written usage. Emphasizes grammar at work. Version for networked computers available. Volumes sold separately. Available for: RSI/RSIII.D Grades: 4-9 Price: \$99.95/ea. Producer: 3R Software.

English — Volume 1

Set of 10 programs provides self-directing remediation on parts of speech and sentence structure. Includes teacher's manual with suggested uses and samples. Available for: APII.32.D Grades: 10+ Price: \$37.40 Producer: Minnesota Educational Computing Consortium (MECC).

Gains in Grammar

Students indicate whether a grammatical mistake is present in the first, second or third line of the sample text. Available for: PET.16.C Grades: 3-6 Price: \$9.95 Producer: Micrograms Inc.

Grammar Package I

Package of six grammar programs on recognizing different parts of speech. Available for: APII.32.D, RSI/RSIII.16.C/D, RSC.16.C Grades: 2-6 Price: \$24.95 Producer: Micro Learningware.

Grammar Problems for Practice

Seven-disk package provides practice in homonyms, verbs, pronouns and modifiers. Work is self-paced. Management system and teacher's guide included. Available for: APII + .48.D Grades: 3-9 Price: \$265.00 Producer: Milliken Publishing Co., Computer Products Div.

Irregular Verbs

Provides practice in using irregular verbs by choosing the correct form for the sentence. Available for: APII/APII + .32.C/D, PET.8.C Grades: 7-12 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

* = Contact producer or distributor

Language Arts Topics and Language Arts Strands

Two programs cover common language usage problems. Reinforce correct usage by example and practice. Provide diagnostic reports and automatic recordkeeping. For CCC mini- and microcomputers. Available for: * Grades: 3-6 Price: * Producer: Computer Curriculum Corp.

Mastering the Parts of Speech

Six disks provide tutorial and drill. Different difficulty levels allow students to progress at their own pace. Includes teacher's manual, 42 reproducible skill sheets, student guide and management system. Available for: APII+.48.D Grades: 6-8 Price: \$270.00 Producer: Society for Visual Education, Inc., The Singer Company.

Nouns/Pronouns

Multilevel program covers: recognition of common and proper nouns, possessives, nouns and pronouns, noun plurals and identification of pronouns. Teacher's guide included. **Available for:** APII + .48.D **Grades:** 3-8 **Price:** \$32.95 **Producer:** Hartley Courseware, Inc.

Parallel Structure

Two-disk program illustrates errors in parallel structure of words, phrases and clauses. Stresses recognition and correction of faulty parallelism. **Available for:** APII/APII+.32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$30.00 **Producer:** Right On Programs, Computeam, Inc.

Past Tense/Present Tense

Helps students learn the proper use of past and present tense. Appropriate for remedial students. **Available for:** APII+.32.D, RSI/RSIII.32.D **Grades:** 3-7 **Price:** \$55.00 **Producer:** Computer Courseware Services, Div. EMC Publishing.



Science Research Associates' COMPUTER DISCOVERY to teach computer literacy. For grades 6-12.

Possessing the Possessives

Reviews the rules and exceptions govern possessives. Students correct errors in saple sentences. Available for: AP APII+.32.C/D, PET.8.C Grades: 7-Price: \$15.00 Producer: Right On P. grams, Computeam, Inc.

Prepositions

Uses practice and/or test mode and simp vocabulary to review use of common pre ositions in prepositional phrases. Ninet percent mastery required for advancemen Available for: PET.8.C Grades: 4-Price: \$12.00 Producer: K8 Software.

Pronouns and Adjectives

Two programs. Student fills in missing pro noun or adjective in a sentence. If wrong twice, student receives help from program Up to four students may take turns and receive separate scores. Teacher may change sentences. Available for: PET.8.C/D Grades: 4-8 Price: \$7.95/ea. Producer: Teacher's PET Software.

Punctuation I and II

Two disks. One covers the period, question mark and exclamation point, the other the comma. Three levels of difficulty. Provide review after four errors. **Available for:** APII.48.D, RSI/RSIII.32.C/D, PET.16.C/D **Grades:** 4-6 **Price:** \$49.00/ea. **Producer:** Educational Activities, Inc.

Punctuation Progress

Challenges students to find a punctuation error in a short passage. Available for: PET.16.C Grades: 3-6 Price: \$9.95 Producer: Micrograms Inc.

Punctuation Skills Program

Two-part program covers use of comma, period, question mark, exclamation point, semicolon and colon. **Available for:** APII.48.D **Grades:** 6-8 **Price:** \$109.95 **Producer:** Milton Bradley, Educational Division.

Quotation Marks

Six-program series uses an interactive, tutorial mode to illustrate and review the use of quotation marks. Package includes reproducible activity masters. Available for: APII.48.C/D, RSIII.32.C/D, PET.16.D Grades: 4-12 Price: \$49.00 Producer: Educational Activities, Inc.

Ouotation Marks

Drill and practice on the appropriate use of quotation marks. Practice sections on direct quotes at end and beginning of sentence. Mastery test results in congratulations or additional review. Available for: PET.8.C Grades: 4-8 Price: \$12.00 Producer: K8 Software.

Quotations

Illustrates punctuation of direct quotes and rules for capitalization within quotes. Students correct errors in sample sentences. Available for: APII/APII + .32.C/D, PET.8.C Grades: 7-12 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Recognizing Nouns and Verbs

Tutorial in recognizing the noun and the verb in a sentence. Includes examples and a game. **Available for:** APII/APII + .32.C/D, PET.8.C **Grades:** 1 **Price:** \$15.00 **Producer:** Right On Programs, Computeam, Inc.

Run-On Sentences

Reviews use of commas and endmarks to avoid run-on sentences. Provides practice

with coordinating conjunctions and conjunctive adverbs. **Available for:** APII/APII+.32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$30.00 **Producer:** Right On Programs, Computeam, Inc.

Sentence Diagramming

Four exercises teach sentence diagramming, word usage and parts of speech. Features three levels of difficulty, each with 20 sentences, optional recordkeeping and teacher-formatted requirements for advancement. Available for: APII.48.D Grades: 7-12 Price: \$24.95 Producer: Avant-Garde Creations.

Sentence Fragments

Two disks provide practice in recognizing and correcting sentence fragments. Available for: APII/APII+.32.C/D, PET.8.C Grades: 7-12 Price: \$30.00 Producer: Right On Programs, Computeam, Inc.

Subject and Verb Agreement

Tutorial on subject-verb agreement. Includes examples and a game in which stu-

dent determines which sentences are correct. Available for: APII/APII+.32.C/D, PET.8.C Grades: 3 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Subject/Verb Agreement and Agreement of Pronoun/Antecedent

Set of three programs. After programs present rules, students practice identifying and correcting errors. Available for: APII/APII+.32.C/D, PET.8.C Grades: 7-12 Price: \$45.00 Producer: Right On Programs, Computeam, Inc.

Subordination

Two disks explain subordinating conjunctions. Exercises provide opportunities to choose appropriate conjunction for sentence clarity. **Available for:** APII/APII+.32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$30.00 **Producer:** Right On Programs, Computeam, Inc.

Using Adjectives/Adverbs Correctly

Program reviews correct use of adverbs with action verbs, adjectives with linking verbs, comparative and superlative forms of

Educational and administrative software Reader's Digest.

Programs are user-friendly and include Manuals written for EVERYONE to understand.
 Available for major brands of microcomputers.

• Discounts available on purchases of multiple sets of courseware.

Mathematics Assessment/Prescriptive Edu-DisksTM

Learning with Mathematics Edu-Disks is student-paced and highly interactive. A tutorial mode not only shows students their errors but also HOW to correct them. Program format includes pre-test, practice, and post-test, and automatic record-keeping makes management easy. Each Level, 1-7, comes with student and administrative diskettes, and a 32-page Teacher's Guide.

Problem-Solving Strategies

Two visually exciting programs teach logical thinking and decision-making at Levels 5-7 and 7-9. **Problem-Solving Strategies** is highly interactive and covers graphing, tables, creative number lines, translations, and Venn and tree diagrams. Each level includes 30 student Workbooks and a 32-page Teacher's Guide.

Vocabulary Edu-DisksTM

A dramatic interweave of words and graphics provides practice and self-instruction in vocabulary and related language arts skills. Three programs each present a different imaginative word game on three vocabulary levels: upper elementary, junior high, and senior high. A menu-driven format allows you to choose the vocabulary level you want.

ListMakerTM

It's more than a mailing list program. **ListMaker** is a new, inexpensive, yet powerful software package that can help you manage your school or district records easily and economically. You determine the kind of information you want **ListMaker** to record. **ListMaker** will then retrieve and print information in the format you want. Use it for grade reports, textbook inventory, labels, letters, and many other time-saving applications.

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language arts

modifiers and double negatives. Available for: APII/APII + .32.C/D, PET.8.C Grades: 7-12 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Verbs

Drills common verb usage problems such as: recognition and identification, tenses, subject/predicate correspondence, contractions and correct usage. Vocabulary is controlled for reading level. Available for: APII + .48.D Grades: 3-8 Price: \$32.95 Producer: Hartley Courseware, Inc.

Verbs and Nouns

Two programs for up to four students. Student selects the verb or noun in a sentence and receives help if wrong twice. Students may take turns and be scored separately. Teacher may change sentences. Available for: PET.8.C/D Grades: 2-5 Price: \$7.95/ ea. Producer: Teacher's PET Software.

Verbs and Their Forms

Tutorial on using the correct verb form. Provides examples and a game using fill-inthe-blank sentences with multiple choice answers. Available for: APII/ APII+.32.C/D, PET.8.C Grades: 4 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Verbs 1 and 2

Two disks provide drill and practice on the use of verbs. Provide examples of present, past and past participle forms followed by practice problems. Includes management system. Available for: APII + .48.D Grades: 3-6 Price: \$49.95 Producer: Hartley Courseware, Inc.

What Are the Parts of Speech?

Program teaches the parts of speech using many examples. Game follows. Available for: APII/APII + .32.C/D, PET.8.C Grades: 6 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

What is a Sentence?

Tutorial explains what a sentence is and gives examples. The student chooses the complete sentence from two sentences. Game follows. Available for: APII/ APII + .32.C/D, PET.8.C Grades: 1 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Reading

AB

Sixteen tutorials use stories and articles to develop reading comprehension skills such as generalization and recall. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 3-6 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Alpine Skier

Set of four programs, each with three rounds of 12 races that use animated graphics to improve reading comprehension skills. Teacher's manuals and administrative system included. Available for: APII/ APII + .32.D, RSI/RSIII.32.D, RSI.16.C Grades: 5-8 Price: \$113.75 Producer: Data Command, Imperial International Learning Corp.

Audio Reading

Individualized drill and practice uses highfrequency vocabulary of 1780 words and CCC's Digital Speech System to direct students through exercises in beginning reading skills. For CCC minicomputer. Available for: * Grades: 1-2 Price: * Producer: Computer Curriculum Corp.

Basic Reading

Provides individualized drill and practice for beginning and remedial readers. Automatic recordkeeping and diagnostic reports provided. For CCC mini- and microcomputers. Available for: * Grades: 2-5 Price: * Producer: Computer Curriculum Corp.

Basic Reading Skills and Basic **Skills Practice**

Five disks use animated graphics, stories and guided questions to provide reading practice. Four practice programs augment the skills program. Available for: APII.16.C/D, PET.16.C/D Grades: 5+ Price: \$50.00/ea. Producer: Brain Box.

Basic Sentences

Individualized drill and practice in simpl sentences for the remedial reader. Basi high-frequency vocabulary. Content from everyday experiences. For CCC mini- an microcomputers. Available for: * Grades 2-4 Price: * Producer: Computer Curricu lum Corp.

Basic Skills Practice A-D

Four packages of five programs each dril. reading skills. Available for: APII.16.D, PET.16.D Grades: 5 + Price: \$55.00/ea. Producer: Computer Courseware Services, Div. EMC Publishing.

Big Door Deal

Set of four programs, each with three rounds of 15 exercises that use TV game formats to teach reading skills such as analogies and figurative language. Animated graphics. Teacher's manual and administrative system included. Available for: APII/ APII + .32.D, RSI/RSIII.32.D, RSI/16.C Grades: 5-8 Price: \$113.75 Producer: Data Command, Imperial International Learning Corp.

EQUIPMENT CODES

Example:

Available for: APII.48.D			
Machine codes used:			
Apple I	API		
Apple II	APII		
Apple II Plus	APII+		
Apple III	APIII		
TRS-80 Model I	RSI		
TRS-80 Model II	RSII		
TRS-80 Model III	RSIII		
TRS-80 Color Computer	RSC		
ATARI 400	AT4		
ATARI 800	AT8		
Commodore PET	PET		
Commodore VIC-20	VIC		
Commodore-64	C64		
Commodore Business			
Computer	CBM		
IBM Personal Computer	IBM		
Texas Instruments 99/4			
Computer	TI		
Texas Instruments 99/4A			
Computer	TIA		
Most personal computers	Most		
Minimum internal memory:			
Minimum internal memory:	4		
4K bytes	8		
8K bytes	16		
16K bytes	10		
etc.			

Minimum peripherals needed:

Cassette player

Contact producer

Disk drive

C

D

Powerful micro-computer software ready to work for teachers, counselors and administrators. All you need is one microcomputer and PRISM.

REKORD

A flexible record-keeping program for administrators, counselors and coordinators of special education programs. Each program offers a broad menu of student variables which can be built into the data base. The result is a highly customized system that can be used to create, maintain and generate just about any kind of records your school may require. REKORD comes with a simple-to-follow user's manual and tutorial disk for staff training.

MATH 1

This multi-disk package provides teachers with a systematic procedure for monitoring student progress through a criterion-referenced item bank tied to over

200 instructional objectives in numeration, operations, applications and problem solving for grades 3-8. The system allows teachers to tailor a program of drills and tests to meet predetermined objectives and build the skills necessary to overcome individual student weaknesses.

READING 1

Here's an important software package to assess accurately and effectively prescribe instruction to meet reading objectives typically taught in grades 3-5. It is a criterion-referenced multi-disk program for word identification, comprehension, and study skills—over 2,000 items in all. READING 1 includes an easy-to-follow user's manual and student workbooks.

Coming soon: MATH 2 and READING 2: criterion-referenced item banks for development of minimal competency skills in reading and mathematics.

PRISM products are available for TRS-80® Model III and Apple II/II Plus® microcomputers.

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2 SOFTWARE language arts

CARIS — Computer Animated Reading Instruction System

Beginning reading program for special education students is especially appropriate for deaf students. Includes teacher's guide. Available for: APII+.D Grades: K-3 Price: \$74.00 Producer: Encyclopaedia Britannica Educational

Cause and Effect Computer Game

Mountain climbing game reinforces reading and reasoning skills through cause and effect questions. Two versions for Grades 2-5 and Grades 4-8. Available for: APII.48.D Grades: 2-8 Price: \$49.95 Producer: Learning Well.™

CD

Series of 16 reading comprehension programs. Features articles and stories written at different levels. Questions at end of each story. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 4-7 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Comprehension Power

Reading comprehension program with four disks for each of 12 reading levels. Levels I-3 are for older students needing remedial help. Each disk contains three reading selections that may be timed or untimed. Teacher's guide included. **Available for:** APII + .48.D **Grades:** 4-12 **Price:** \$150.00/ level **Producer:** Milliken Publishing Co., Computer Products Div.

Comprehension Power Program

Inductively develops 25 comprehension and study skills through preview skimming and reading practice. Includes teacher's manual, recordkeeping forms, duplicating masters and a reference card for computer use. **Available for:** APII.48.D **Grades:** 4-12 **Price:** \$150.00/level **Producer:** Instructional/Communications Technology Inc.

Compu-Read 3.0

A program for improving reading speed and recall. Teaches letters, words, synonyms, antonyms and sentences. **Available for:**

APII/APII + .48.D, AT8.48.D **Grades:** 5 + **Price:** \$29.95 **Producer:** Edu-Ware Services, Inc.

Computer Drill and Instruction: Phonics

Audio tapes complement computer instruction in initial and final consonants, short and long vowels, consonant blends, consonant and vowel digraphs and advanced phonics. Complete program has 50 cassettes, 16 disks and teacher's guide. Available for: AT8.32.D* Grades: 1-3 Price: \$1150.00 Producer: SRA, Science Research Associates, Inc.

Consonant Blend Bull's-eye

Three programs use dart board scenario to develop skill of matching initial consonant blend with vowel-consonant patterns. Available for: TIA.C/D Grades: 2-6 Price: \$14.95/ea. Producer: Microcomputers Corp.

Consonant-Vowel-Consonant

Reading skills program provides practice in decoding short vowel words and in initial consonant substitution. Includes teacher's manual. Available for: PET.16.C Grades: 1-3 Price: \$20.00 Producer: Microcomputer Workshops Corp.

Consonants

A complete series of phonics lessons including: initial and final consonants and final and medial blends. Teacher records directions and instructions on tape with use of Hartley's Cassette Control Device. Available for: APII+.48.D.* Grades: 1-4 Price: \$79.95 Producer: Hartley Courseware, Inc.

Critical Reading

Eight-disk series helps students master rules of logic that can improve reading comprehension. Includes management system that allows print-out of student records. Available for: APII + .48.D Grades: 7-9 Price: \$750.00 Producer: Borg-Warner Educational Systems.

Critical Reading Skills

Develops vocabulary and reading comprehension, including critical interpretive skills, through readings in various content areas. Student reads passages in text, answers questions at terminal. For CCC miniand microcomputers. Available for: * Grades: 7 + Price: * Producer: Computer Curriculum Corp.

Diascriptive Reading

Six diagnostic tests for main idea, details, fact/opinion, vocabulary, sequence and inference. The program diagnoses and prescribes. Management system on disk. **Available for:** APII.48.C/D, RSI/RSIII.32.C/D, PET.16.C/D **Grades:** 3-8 **Price:** \$245.00 **Producer:** Educational Activities, Inc.

Drawing Conclusions Computer Game

Program with Bingo-game format provides practice in completing sentences and drawing conclusions. Versions for Grades 2-5 and Grades 4-8 available. Available for: APII.48.D. Grades: 2-8 Price: \$49.95 Producer: Learning Well.™

Early Reading

Program module uses color graphics and computer speech to introduce and reinforce reading skills. Developed by TI in conjunc-



Milton Bradley's two-part PUNCTUATION SKILLS PROGRAM for grades 6-8.

tion with the educational staff of Scott, Foresman and Company. Speech synthesizer required. Available for: TIA.16.* Grades: K-3 Price: \$54.95 Producer: Texas Instruments, Inc., Personal Computer Div.

Fact or Opinion Computer Game

Shopping trip game reinforces reading comprehension and develops skills in discerning fact and opinion. Two versions for Grades 2-5 and Grades 4-8. Available for: APII.48.D Grades: 2-8 Price: \$49.95 Producer: Learning Well.™

Fundamental Phonics and Word Attack

Uses computer and tape recorder simultaneously for practice exercises in visual discrimination, letter recognition, sight words, consonant blends, vowel sounds and syllabication. **Available for:** APII.32.D, RSI/RSIII.16.C, RSIII.32.D **Grades:** 1-4 **Price:** \$498.00 **Producer:** Random House School Division.

Getting the Main Idea Computer Game

A world-travel board game. After reading a story, the player selects one of three choices for the main idea. Players move additional spaces or take extra trips for answering correctly. Versions for Grades 2-5 and Grades 4-8. Available for: APII.48.D Grades: 2-8 Price: \$49.95 Producer: Learning Well.™

Great Classics

Overview of classics including Julius Caesar, Macbeth, Ivanhoe, Moby Dick, William Tell. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 6 + Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

HBJ Bookmark Reading Program, Eagle Edition

Sight vocabulary exercises correlated to primary levels of *Bookmark Reading Program*, Eagle Ed. Additional sentence, definition and practice drill exercises intended for independent use by pupils. Separate package per level. **Available for:** APII.48.D **Grades:** 1-3 **Price:** From \$60.00 **Producer:** Harcourt Brace Jovanovich, School Department.

* = Contact producer or distributor

High Motivation Reading Series

Measures comprehension in skill areas including main idea, sequence of events, details, separating fact and opinion. Requires TRS-80 MicroPILOT. Six programs and student record system available. Available for: RSI.32.* Grades: 4-6 Price: From \$59.95 Producer: Radio Shack.

How to Read in the Content Areas

Develops reading skills including spotlighting, surveying, detecting and recalling. Provides content area readings, masters and teacher's guide. Available individually or as a set. **Available for:** APII.48.C/D, RSI/RSIII.32.C/D, PET.16.C/D **Grades:** 5-6 **Price:** \$189.00 **Producer:** Educational Activities. Inc.

Inference Computer Game

Provides practice in reading stories and making inferences about them. Two versions for Grades 2-5 and Grades 4-8. Available for: APII.48.D Grades: 2-8 Price: \$49.95 Producer: Learning Well.™

Interactive Fiction™ Series

Four stories let user interact with characters and situations and so influence plot and outcome. **Available for:** RSI/RSIII.32.D **Grades:** 6+ **Price:** \$29.95/ea. **Producer:** Adventure International.

Long/Short Vowel Space Ships

Uses arcade game format to teach vowel sounds. **Available for:** RSI/RSIII.16.C **Grades:** 1-2 **Price:** \$10.95 **Producer:** Little Bee Educational Programs.

Micro Skillbuilder Set II: Hi/Lo Newbery

Skill-building and reinforcement games based on Newbery Award books. Covers vocabulary, fact and opinion, inferences, synonyms, sequence recall, characterization. Set of 20 programs, five books and five story guides. **Available for:** APII.32.D, RSI/RSIII.16.C, PET.8.C **Grades:** 4-9 **Price:** \$79.00 **Producer:** Sunburst Communications.

Microcomputers Corporation Phonics

Five series of programs reinforce recognition and identification of short vowel sounds. Use stories, music, sound and graphics. Available for: TIA.C/D Grades: K-2 Price: \$14.95/ea. Producer: Microcomputers Corp.



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language arts

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Newbery Winners

Four vocabulary and comprehension drills and games keyed to each of 15 Newbery Award books. Each software-book package also includes an instructional manual and teacher's guide. Available for: APII.32.D, RSI/RSIII.16.C, PET.8.C Grades: 3-8 Price: \$20.00/ea. Producer: Sunburst Communications.

Our Weird and Wacky World

Two part series: Literal Comprehension Program: Reading with Understanding and Critical Reading Program: Reading with Critical Understanding. Teaches comprehension through stories. Masters and manual. Available for: APII.48.C/D, RSI/RSIII.32.C/D, PET.16.C/D Grades: 3-4 Price: \$39.95 Producer: Educational Activities, Inc.

The PAL Placement Test

Twenty-minute placement test for the PAL reading education program. Includes a \$10.00 coupon good on the purchase of any PAL Master Disk or Reading Curriculum package. Available for: APII.48.D Grades: 2-6 Price: \$29.95 Producer: Universal Systems for Education, Inc.

PAL Reading Curriculum Series

Master disk package and six curriculum packages for Grades 2-6. Diagnoses reading problems and provides remedial exercises. All sold separately. **Available for:** APII.48.D **Grades:** 2-6 **Price:** \$99.95/ea. **Producer:** Universal Systems for Education, Inc.

Philadelphia C.A.R.D. Reading Program

Series of modules helps develop reading comprehension skills. Available for: RSIII.48.D Grades: 4-6 Price: \$199.00/module Producer: Radio Shack.

Prism

First of a series of stories on disk. Uses sound and graphics to tell the adventure of the three golden keys of color. Story includes clues to hiding place of the three jeweled keys. **Available for:** APII/APII+.48.D, AT4/AT8.24.C/D **Grades:** K+ **Price:** From \$19.95 **Producer:** International Software Marketing, Ltd.

Question/Answer and Vocabulary Facilities — PHONET

Allows student to work through prepared phonetic exercises in sound association, affixes, syllables, contractions and homonyms. Summary of student performance displayed after each lesson. Available for: APII.32.D Grades: 1-6 Price: * Producer: TIES: Total Information for Ed. Systems.

Reading and Reading for Comprehension

Two sets of drill-and-practice programs review word attack, vocabulary, comprehension and work study skills for remedial and regular students respectively. For CCC

mini- and microcomputers. Available for:

* Grades: 3-7 Price: * Producer: Computer Curriculum Corp.

Reading by Phonics

Phonics tutorial covers consonants, long and short vowels, beginning and ending sounds, digraphs, blends and contractions. Thirty-two program series. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: K-3 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Reading Comprehension III and IV

Two 16-program units for vocationally oriented students. Reading material is related to auto mechanics and shop. Require Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 9-12 Price: \$79.00/ea. Producer: Dorsett Educational Systems, Inc.

Reading Comprehension: What's Different?

User selects word that doesn't belong in a series. Total of 200 exercises. Available for: AT.8.D/C, APII.32.D Grades: 3 + Price: \$23.95 Producer: Program Design, Inc.

Reading for Detail

Players read short stories and then answer questions related to details such as whowhat-why-where-when. Two versions available for Grades 2-5 and Grades 4-8. Available for: APII.48.D Grades: 2-8 Price: \$49.95 Producer: Learning Well.™

Reading is Fun

Four stories: Dracula, Hound of the Baskervilles, Moby Dick, 20,000 Leagues Under the Sea. Reinforce comprehension, spelling and vocabulary. Each package includes book, read-along cassette tape, computer exercises. Available for: RSC.4.C Grades: 4-6 Price: \$14.95/ea. Producer: Radio Shack.

Reading is Rewarding

Introduces the four basic reading skills: recalling details, identifying the main idea, drawing conclusions and putting details in order. Available for: APII+.16.D, PET.16.D Grades: 5 + Price: \$55.00 Producer: Computer Courseware Services, Div. EMC Publishing.

EQUIPMENT CODES

Example:

Available for: APII.48.D

38 31 des anade

Machine codes used:	
Apple I	API
Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
Minimum internal memory:	

4K bytes	4
8K bytes	8
16K bytes	16
etc	

Minimum peripherals needed:

Cassette player	C
Disk drive	D
Contact producer	

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2 SOFTWARE language arts

Reading 1 and Reading 2

Two sets of diagnostic reading programs that identify needs, offer drill and practice, and assess mastery. Management system included. First set for Grades 3-5. Second, 7+. Available for: APII.48.D Grades: 3+ Price: \$250.00/ea. Producer: The Psychological Corp.

Reading Program

Augments basal reading programs. Features sound, animation and full color. Includes teacher's guide. Available for: Most.48.D Grades: K-12 Price: * Producer: American Educational Computer, Inc.

Reading Skills Courseware Series

Supplements basal reading programs. Covers word identification, comprehension, study skills, research and literary appreciation. Twelve modules, each with teacher's manual and pupil reader. Available for: TIA.* Grades: K-6 Price: \$58.95/ea. Producer: Scott, Foresman and Co., Electronic Publishing Div.

Readings in Literature

Twenty-seven famous prose, poem and song selections. The student must guess the word missing from a line. Promotes study and memorization. Available for: APII.D Grades: 4-7 Price: \$29.95 Producer: George Earl.

Sequence and Logic in Storytelling

Program stresses sequence and logic in exercises that involve putting sentences in correct, logical order. Available for: APII/APII+.32.C/D, PET.8.C Grades: 3 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Sequence Computer Game

Players arrange sentences from a story in the correct sequence as they play a competitive game. Develops sequencing and reasoning skills. Two versions for Grades 2-5 and Grades 4-8. Available for: APII.48.D Grades: 2-8 Price: \$49.95 Producer: Learning Well.™

Sequencing Sam

After reading a story, students place events in the correct order. Twenty-four programs available. Available for: PET.16.C Grades: 1-8 Price: \$9.95/ea. Producer: Micrograms Inc.

Speed Reader

Five-part reading program helps improve reading speed, comprehension and memory. Training in perception and eye movements is also incorporated. Offers ten stages of exercises. Available for: APII/APII+.48.D* Grades: 7 + Price: \$70.00 Producer: Special Delivery Software, Apple Computer, Inc.

Steps to Advanced Reading: Speed Reading CoursewareTM

Four-disk package provides 20 speedreading lessons. Uses serial tachistoscopic/expanded line technique to increase speed while maintaining comprehension. Includes 28 articles on disk, 15 articles in a book, tests and worksheets. Available for: APII + .48.D Grades: 7 + Price: \$149.00 Producer: Creative Curriculum, Inc.

Tank Tactics

Set of seven programs, each with three rounds of six reading games that teach word skills. Teacher's guide and management system included. **Available for:** APII/APII+.32.D, RSI/RSIII.32.D, RSI.16.C **Grades:** 5-8 **Price:** \$197.50 **Producer:** Data Command, Imperial International Learning Corp.

Tic-Tac-Toe (Vowels)

Five programs use tic-tac-toe game format to reinforce vowel sounds. Build vocabulary and scanning techniques. **Available for:** TIA.C/D **Grades:** 1-3 **Price:** \$14.95/ea. **Producer:** Microcomputers Corp.

Tutorprogram: Following Directions

A tutorial on following directions stresses the importance of careful reading. The student must accurately follow sets of directions to advance in the lesson. **Available for:** APII/APII + .48.D **Grades:** 3-6 **Price:** \$162.00 **Producer:** Random House School Division.

Tutorprogram: Inferences

Four-part program covers using what and where, when and how, and why. Includes

final test. Disks also available separately Available for: APII.48.D Grades: 4-Price: \$216.00 Producer: Random House School Division.

Tutorprogram: Reading Interpretations I

Short stories followed by key questions provide remedial instruction in reading comprehension. Available for: APII/APII + . 48.D Grades: 3-6 Price: \$216.00 Producer: Random House School Division.

Video Speed-Reading Trainer

Tries to improve reading comprehension and speed by using the scientific principle behind the tachistoscope. This three-par program trains the eyes and mind to quickly recognize numbers, letters, words and phrases. Available for: RSI.16.C Grades: 4 + Price: \$9.95 Producer: Instant Software™, Inc., Wayne Green, Inc.

Vowels

Consists of 53 lessons of 20 presentations each covering: long and short vowels, double vowels, diphthongs and others. Teacher can record instructions on audio tape with Hartley's Cassette Control Device. Available for: APII+.48.D.* Grades: 1-3 Price: \$93.95 Producer: Hartley Courseware, Inc.

Vowels Tutorial

A series of lessons presents student with a visual stimulus and audio instructions. If student makes an error, the program branches to a brief tutorial. Pictures match words with the same vowel sound. Available for: APII+.48.D Grades: 1-3 Price: \$120.00 Producer: Hartley Courseware, Inc.



Eight-disk CRITICAL READING series from Borg-Warner Educational Systems for grades 7-9.

Who, What, Where, When, Why

Each of 14 lessons sequenced from easy to hard contains 20 presentations that require the student to discriminate between who, what, why, where and when. Teacher's guide included. Available for: APII+.48.D Grades: 1-5 Price: \$35.95 Producer: Hartley Courseware, Inc.

Spelling

Compu-Spell

Teaches spelling through positive reinforcement with hi-res graphics. Can accommodate up to 60 learners. Monitors individual progress. Available for: APII/APII+.48.D Grades: 4-8 Price: \$29.95 Producer: Edu-Ware Services, Inc.

Contractions

Provides practice in recognizing and spelling contractions. Keeps score. Available for: RSI/RSIII.16.C Grades: 2-4 Price: \$10.95 Producer: Little Bee Educational Programs.

Do-It-Yourself: Spelling

User makes up own word list and voice cassette, which computer uses to provide drill. Lists of grade-appropriate words provided. Available for: AT.16.C Grades: 1 + Price: \$19.95 Producer: Program Design, Inc.

Flash Spell — Helicopter

Spelling game designed for any grade level uses teacher's words. Teacher's manual provides instructions on entering vocabulary. Available for: PET.16.C Grades: K-12 Price: \$20.00 Producer: Microcomputer Workshops Corp.

HBJ Spelling Practice Diskettes

Seven activities reinforce vocabulary from HBJ Spelling. Recordkeeping disks monitor progress. Program suitable for use with other spelling series. Package for each grade contains three disks and manual. Available for: APII.48.D Grades: 4-6 Price: \$150.00/grade Producer: Harcourt Brace Jovanovich, School Department.

Junior and Senior High Spelling Diskette

Twelve drill-and-practice spelling programs, each containing 60 grade-appropri-

ate words. Individual programs available on cassette. **Available for:** Most.16.D **Grades:** 7-12 **Price:** \$180.00 **Producer:** Microphys Programs.

Let's Spell

Uses animation, sound and voice to teach 90 basic words. **Available for:** AT.8.D/C **Grades:** 2-5 **Price:** \$23.95 **Producer:** Program Design, Inc.

Let's Spell with Type-'N-Talk™

Teaches, reviews and tests 1800 words. Requires Votrax Type-'N-Talk™ speech synthesizer. Available for: AT.32.D* Grades: 2-6 Price: \$79.95 Producer: Program Design, Inc.

Rules for C and K and Rules for G and J

Two programs provide practice in applying spelling rules. Use music and audio prompts. Available for: TIA.C/D Grades: 2-6 Price: \$14.95/ea. Producer: Microcomputers Corp.

Scrambled Letters and Flash Spelling

Two spelling programs. In *Scrambled Letters*, two students compete in correctly unscrambling words. In *Flash Spelling*, student types new spelling words after they're flashed on the screen. **Available for:** APII.48.D, RSI/RSIII.32.C/D, PET.16.C/D **Grades:** 2-8 **Price:** \$14.95 **Producer:** Educational Activities, Inc.

Special Learning Ed. Spelling Program

Tutorial program covers five basic spelling rules, exceptions and generalizations. Uses drill, practice, repetitive exercises and reinforcement. Correct answers available at end of each lesson. **Available for:** APII.16.D, PET.16.C **Grades:** 3-12 **Price:** \$199.00 **Producer:** Special Learning ED Software.

Spell That Word!

Game show format. Students spell words that have been flashed on the screen. Thirteen programs available. Available for: PET.8.C Grades: 3-5 Price: \$9.95/ea. Producer: Micrograms Inc.

* = Contact producer or distributor

Spell Writer

Three Speak & Spell packages use text-tospeech technology. User can design customized spelling lessons, play word games and make additional copies of word lists. Requires Terminal Emulator II and speech synthesizer. Available for: TIA.16.C/D* Grades: 1-8 Price: \$29.95 Producer: Texas Instruments, Inc., Personal Computer Div.

Spellbound

Spelling program uses word base created by user. Two levels: learning and test. Comes with word base of 300 frequently misspelled words. Available for: AT4/AT8.24.C Grades: 1-8 Price: \$20.00 Producer: T.H.E.S.I.S.

Spelling

Teaches and drills spelling skills in a variety of quiz formats. Three levels of difficulty. Teacher's guide provided. **Available for:** RSI/RSIII.C/D **Grades:** 3-8 **Price:** \$35.00 **Producer:** Concept Educational Software.

Spelling

Sixteen programs cover plurals, suffixes, homonyms, spelling by syllables and doubling consonant letters. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 3-12 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Spelling Bee

Two programs introduce spelling and reading by linking familiar objects with words. Teaches simple two-, three- and four-letter words, one syllable words, vowels and consonants. **Available for:** APII/APII + .48.D **Grades:** PreK-1 **Price:** \$39.95 **Producer:** Edu-Ware Services, Inc.

Spelling Breakthrough and Steps to Spelling Breakthrough

Four two-disk packages review words misspelled by 50 percent of students in various grades. Each disk contains 240 words and 480 exercises. Available as set. Available for: APII + .48.D Grades: 2 + Price: \$96.00/ea. Producer: Computer Courseware Services, Div. EMC Publishing.

Spelling Builder

Eight programs and an audio cassette offer spelling drill and a method of approaching difficult words. Final test of 25 ten-word

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lists. Available for: AT.16.D/C, APII.32.D Grades: 7+ Price: \$26.50 Producer: Program Design, Inc.

Spelling in Context

Uses Cloze technique to give context to words flashed on the screen. Over 5000 words in series. Available by grade level. **Available for:** Most **Grades:** 1-8 **Price:** \$265.00/ grade **Producer:** Bertamax, Inc., Micro School Programs.

Spelling Package

Drill program includes cassette interface to control audio tape recorder. Teacher records own word list, which program then uses to drill students. Available for: PET.16.C*, APII.32.D* Grades: K-12 Price: From \$99.95 Producer: Teaching Tools: Microcomputer Services.

Spelling Series

Five-disk set uses broad vocabulary of most frequently misspelled words. Each program uses a different group of words. **Available for:** APII/APII+.32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$75.00 **Producer:** Right On Programs, Computeam, Inc.

Spelling Strategy

Self-paced instruction helps children make lasting mental pictures of words for easy recall. Sound and color graphics. User can add personal spelling list. **Available for:** APII/APII + .48.D **Grades:** 2-8 **Price:** \$45.00 **Producer:** Special Delivery Software, Apple Computer, Inc.

Spelling Those Plurals

Program tests spelling skills with emphasis on plurals. **Available for:** APII/APII+.32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$15.00 **Producer:** Right On Programs, Computeam, Inc.

Spelling Tooder

Tests spelling by presenting both misspelled and correctly spelled words. Uses teacher-supplied word lists. **Available for:** RSI/RSIII.16.C/D **Grades:** 1 + **Price:** \$11.95 **Producer:** Cove View Press.

Spelling Tutor

Drill uses teacher's word lists. Tracks and records student progress. Available for: RSI/RSIII.16.C/D Grades: 1+ Price: \$11.95 Producer: Cove View Press.

Spelltronics

Uses letter Cloze technique to reinforce correct spelling. Helps build visual memory. Program teaches 240 new words. Teacher may add words. Available for: APII.48.C/D, RSI/RSIII.32.C/D, PET.16.C/D Grades: 4-12 Price: \$65.00 Producer: Educational Activities, Inc.

Syllable Breakaway

Reinforces syllabication. The instructor can use the word list supplied or make new word lists. **Available for:** RSI/RSIII.16.C **Grades:** 2-4 **Price:** \$10.95 **Producer:** Little Bee Educational Programs.

Whole Brain Spelling

Helps develop internal visualization skills for improving spelling. Available with a variety of 2,000-word word lists for differ-

EQUIPMENT CODES

Example:

Available for: APII.48.D

Machine codes used:	
Apple I	API
Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
Minimum internal memory:	
4K bytes	4
8K bytes	8
16K bytes	16
atc	

Minimum peripherals needed:

D

Cassette player

Contact producer

Disk drive

ent educational levels. Available for APII+.48.D Grades: PreK + Price \$34.95 Producer: SubLOGIC Communications Corp.

Word Scrambler and Super Speller

Includes practice drills for missed words optional word unscrambling and comprehensive scoring. Three levels of words User can enter own vocabulary. **Available for:** APII.48.D **Grades:** K + **Price:** \$19.95 **Producer:** Avant-Garde Creations.

Word Zapper!

Arcade-type spelling game. Three levels of difficulty. Available for: PET.16.C Grades: 3-8 Price: \$9.95 Producer: Micrograms Inc.

Vocabulary

Antonyms

Five-disk series tests antonym recognition and explains correct answers. **Available for:** APII/APII + .32.C/D, PET.8.C **Grades:** 10-12 **Price:** \$75.00 **Producer:** Right On Programs, Computeam, Inc.

Antonyms/Synonyms

Reinforces recognition and use of synonyms and antonyms. Difficulty level gradually increases from third- to eighth-grade level. Program allows recordkeeping and lets teacher modify and create lessons. Available for: APII+.48.D Grades: 3-8 Price: \$39.95 Producer: Hartley Courseware, Inc.

Apple Hangman

The program features word lists and clues created by the teacher and student. Can store up to 30 word games of up to 50 words each. Available for: APII.48.D* Grades: 2+ Price: \$29.95 Producer: Aquarius Publishers, Inc.

A Batch of Endings and The End of Endings

Two-program set provides practice in adding prefixes and suffixes. **Available for:** PET.8.C, APII/APII+.32.C/D **Grades:** 7-12 **Price:** \$30.00 **Producer:** Right On Programs, Computeam, Inc.





The ultimate component for Holt's math and reading programs

Holf CLASS

(Computerized Learning and Scoring System) is the new electronic curriculum management system that:

- Parallels basic learning objectives in HOLT MATH and HOLT BASIC READING
- Tracks students' day-to-day progress
- Is compatible with Commodore, Apple II Plus, TRS-80 Model III, and the IBM Personal Computer
- With the help of Diagnostic Tests, identifies specific learning difficulties and prescribes lessons for reteaching
- Automatically scores tests and helps eliminate other time-consuming record keeping and classroom management paperwork
- In all, produces 14 different reports for parents, teachers, administrators, and district curriculum specialists

CLASS—Software for curriculum management Gives teachers more time to do what they do best—Teach!

We will be adopting Re	lathematics in eading in ore information on CLASS []	
Name	Position	
School		
Address		
City	State	Zip
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The Chambers of Vocab

Vocabulary maze game teaches words in context as player overcomes such wordbeasts as the Syllamanders and the Bliterates. Also includes pre- and post-game activities and 300-word dictionary. **Available for:** APII.48.D **Grades:** 4 + **Price:** \$48.96 **Producer:** Reader's Digest Services, Inc., Educational Div.

Cross Clues

Two-person word game. Students uncover hidden words in 50 different grids. Available for: APII/APII + .48.D Grades: 6 + Price: \$29.95 Producer: SRA, Science Research Associates, Inc.

Crypto

Game program lets students use their skills of logic to decode cryptograms. By using single letters, words, double letters in words and punctuation clues, students decode mysterious sentences. Available for: APII.48.D, RSI/RSIII.32.C/D, PET.16.C/D Grades: 4-8 Price: \$15.95 Producer: Educational Activities, Inc.

Definitions

Three-disk series emphasizes correct selection of words by definitions. **Available for:** APII/APII + .32.C/D, PET.8.C **Grades:** 10-12 **Price:** \$45.00 **Producer:** Right On Programs, Computeam, Inc.

Essential Vocabulary Series

Five sets of programs and workbooks review structure, homonyms, homographs, antonyms, synonyms, words in context. For Grade 2-4 reading level. **Available for:** APII.32.D, RSIII.32.D, RSI.32.C **Grades:** 5-12 **Price:** \$29.95/ea. **Producer:** Media Materials, Inc.

Etymology

Five-disk set covers Greek roots and prefixes, Latin roots and prefixes, and foreign words and phrases. Students derive word meanings through knowledge of prefixes and roots. **Available for:** APII/APII+.32.C/D, PET.8.C **Grades:** 10-12 **Price:** \$75.00 **Producer:** Right On Programs, Computeam, Inc.

Final Consonant and Word Family Bingo

Ten Bingo-format games use randomly selected word patterns to teach final consonant word endings and word families. Programs keep record of student progress. Available for: TIA.C/D Grades: 1-6 Price: \$14.95/ea. Producer: Microcomputers Corp.

Fishing for Homonyms

Like the card game Fish. Matches words with homonyms. Available for: AT4.16.C, AT8.16.D, APII+.48.D Grades: 3-6 Price: \$25.00 Producer: T.H.E.S.I.S.

Foreign/English

Generates multiple choice questions about 900+ American words that come directly from other languages. Definitions, punctuation, originating language and literal translation are given for answers. **Available for:** APII.D **Grades:** 9+ **Price:** \$30.00 **Producer:** SEI, Sliwa Enterprises Inc.

Glossary of Usage

Five-disk program reviews word usage. Includes student exercises. **Available for:** APII/APII + .32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$75.00 **Producer:** Right On Programs, Computeam, Inc.

Hangman

This traditional hangman uses a large vocabulary and some difficult words. **Available for:** RSI/RSIII.C, APII.D **Grades:** 2+ **Price:** \$24.95 **Producer:** Aquarius Publishers, Inc.

Hangman

Traditional hangman at three levels of play. Player can use keyboard or joystick. Requires ATARI 410[™] Program Recorder. **Available for:** AT4/AT8.8.C* **Grades:** 3 + **Price:** \$14.95 **Producer:** ATARI, Inc., Home Computer Div.

Hearing the Homonyms

Practice in selecting the right word from two or three choices. **Available for:** APII/APII+.32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$15.00 **Producer:** Right On Programs, Computeam, Inc.

Homonyms

Introduces each pair of homonyms with a definition and an example of correct usage.

Student then selects correct one from the context of another sentence. Lets teacher create and modify lessons. Available for: APII + .48.D Grades: 3-8 Price: \$39.95 Producer: Hartley Courseware, Inc.

Homonyms

Tutorial uses examples to explain homonyms. Game with multiple choice questions follows. Available for: APII/APII+.32.C/D, PET.8.C Grades: 2 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Jotto

Game builds vocabulary, develops ability to analyze patterns and promotes logical thinking. Three levels of play. **Available for:** TIA.D/C **Grades:** 3 + **Price:** \$14.95 **Producer:** Microcomputers Corp.

Key Lingo

Game teaches words in context. By successfully trading words and playing word games with islanders, player receives clues to the location of Key Lingo and the Tablet of Wisdom. Pre- and post-game activities and 300-word dictionary included. Available for: APII.48.D Grades: 4+ Price: \$48.96 Producer: Reader's Digest Services, Inc., Educational Div.

Magic Spells

Scrambled word game in which children compete with a demon in a hunt for treasure. Success leads to fanciful rewards. User can add personalized word lists. Sound optional. Available for: APII/APII + .48.D Grades: K-8 Price: \$45.00 Producer: Special Delivery Software, Apple Computer, Inc.

MicroTutorII Language Arts (Word Structure)

Eight-disk tutorial package on word structure. Includes pre- and post-tests, management system and user's manual. Available for: APII+.48.D Grades: 3-12 Price: \$400.00 Producer: JMScandura Associates, Instructional Micro Systems, Inc.

Minicrossword

Over 500 computer-generated puzzles test player's vocabulary. Up to 18 words per game. Available for: AT.48.D/C, APII.48.D Grades: 1 + Price: \$23.95 Producer: Program Design, Inc.

Multiple Skills

Lessons cover root words, affixes, homonyms, compound words, plurals and contractions. Directions on audio tape. Requires Hartley's Cassette Control Device and a tape recorder. Available for: APII + .48.D.* Grades: 1-3 Price: \$92.95 Producer: Hartley Courseware, Inc.

The O'Brien Vocabulary **Placement Test**

Graduated vocabulary test finds student's independent reading level quickly. Validated with over 7000 students. Discounts guessing. Available for: APII.48.D, RSI/ RSIII.32.C/D, PET.16.C/D Grades: 1-7 Price: \$19.95 Producer: Educational Activities, Inc.

Opposites

A drill-and-practice disk intended to build vocabulary. Allows the teacher to add words and create new lessons. Teacher's guide. Available for: APII + .48.D Grades: 1-8 Price: \$29.95 Producer: Hartley Courseware, Inc.

Picnic

Word and logic game appropriate for both individual and group use. Player must guess word generated from computer's 2000word list. Three levels of difficulty. Available: APII + .48.D Grades: 3 + Price: * Producer: EduTech.

Pik-Pek-Put

Set of eight programs, each with three rounds of six word-skill games. Offer optional rounds and student rewards. Teacher's manuals and administrative system included. Available for: APII/ APII + .32.D, RSI/RSIII.32.D, RSI.16.C Grades: 5-8 Price: \$227.50 Producer: Data Command, Imperial International Learning Corp.

PSAT and SAT Word Attack Skills

Two programs give college-bound students practice with vocabulary, word meaning, antonyms, and roots and suffixes. Available for: APII/APII + .48.D Grades: 10-12 Price: \$49.00/ea. Producer: Edu-Ware Services, Inc.

Question/Answer and Vocabulary Facilities — SIMS

Four games - Hangman, Scramble,

Spell1, Worder — designed for remedial reading students. Include 15-word word lists chosen from SIMS reading curriculum. Available for: APIL32.D Grades: 1-6 Price: * Producer: TIES: Total Information for Ed. Systems.

Roots/Affixes

Covers root words, prefixes and suffixes. Presents both common prefixes and Latin/ Greek prefixes. Vocabulary level gradually increases from third to eighth grade. Teacher's guide included. Available for: APII + .48.D Grades: 3-8 Price: \$39.95 Producer: Hartley Courseware, Inc.

Senior and Junior High Vocabulary Diskette

Two disks of 15 drill-and-practice programs each. Each program contains 30 words grouped by grade level. Individual programs available on cassette. Available for: Most. 16.D Grades: 7-12 Price: \$180.00 Producer: Microphys Programs.

Synonyms

Five-disk series tests synonym selection. Explains answers. Available for: APII/ APII + .32.C/D. PET.8.C Grades: 10-12. Price: \$75.00 Producer: Right On Programs, Computeam, Inc.

T, U, V, W, X, Y, Z and VZ

Eight 16-program units teach reading skills through vocabulary activities. Introduce and define words in context. EDL/McGraw Hill word list used. Require Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: K-8 Price: \$79.00/ea. Producer: Dorsett Educational Systems, Inc.

Tennis, Anvone!

Set of six programs, each with three rounds of six games that use animated graphics to teach word recognition. Teacher's guides and management system. Available for: APII/APII + .32.D, RSI/RSIII.32.D. RSI.16.C Grades: 5-8 Price: \$170.75 Producer: Data Command, Imperial International Learning Corp.

Time Bomb

User must uncover a secret word before a bomb goes off. Uses hundreds of words and



Requires Apple II Plus 48 K, A Registered Trademark of Apple Computer Inc.

Circle No. 119 on Reader Inquiry Card

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hi-res graphics. **Available for:** AT.16.D/C **Grades:** 3 + **Price:** \$23.95 **Producer:** Program Design, Inc.

Trickster Coyote

Fast-paced game in which player wins the Totem of the Straight Tongue by matching words with word-wise Trickster Coyote. Also includes pre- and post-game activities and 300-word dictionary. Available for: APII.48.D Grades: 4+ Price: \$48.96 Producer: Reader's Digest Services, Inc., Educational Div.

Verbal Skills Pak

Special package of three menu-driven programs — Vocabulary Builder, Word Analogy and Sentence Completion — prepares student for college board exams. Also sold separately. Available for: APII.D Grades:

- WE TAKE THE CONFUSION OUT OF YOUR SOFTWARE BUYING DECISIONS WITH THE LARGEST EDUCATIONAL PROGRAM COLLECTION UNDER ONE ROOF.
- 100'S OF QUALITY PROGRAMS SELECTED FROM EVERY PUBLISHER.
- PRE-SCHOOL THROUGH COLLEGE.
- CATALOGS SUPPLEMENTED QUARTERLY.
- DISCOUNT PRICES:

Send for your choice of Academic Software's FREE, No-Frills looseleaf catalogs.

□ PET □ Atari □ Apple □ TRS-80

Academic Software, Dept. L 22 East Quackenbush Ave. Dumont, NJ 07628 (A Division of Software City)

Circle No. 101 on Reader Inquiry Card

10+ Price \$60.00 Producer SEI, Sliwa Enterprises Inc.

Vocab

Uses two synonym drill and quiz formats to build vocabulary. **Available for:** PET.8.C **Grades:** 7-12 **Price:** \$15.95 **Producer:** Tycom Associates.

Vocabulary

Builds and reinforces vocabulary at three levels of difficulty. Includes quizzes, grading system and teacher's guide. Available for: RSI/RSIII.C/D Grades: 3-12 Price: \$35.00 Producer: Concept Educational Software.

Vocabulary

Up to three students compete in Elementary Bowl game. Ten programs of varying difficulty available. **Available for:** PET.8.C **Grades:** 3 + **Price:** \$9.95/ea. **Producer:** Micrograms Inc.

Vocabulary Crosswords

Ten programs use crossword puzzle format to help strengthen vocabulary. **Available for:** PET.8.C **Grades:** 3 + **Price:** \$9.95/ea. **Producer:** Micrograms Inc.

Vocabulary — Dolch

Students see and hear common words (Dolch pre-third level). After a word appears on the screen, the student tries to pronounce it and presses "return" to hear it. Requires Hartley's Cassette Control Device (CCD) for auditory. Available for: APII + .48.D.* Grades: K-3 Price: \$39.95 Producer: Hartley Courseware, Inc.

Vocabulary — Elementary

Vocabulary development program includes 63 different lessons with up to 40 presentations per lesson. The student sees word, pronounces it, then presses return to hear it. Cassette Control Device needed for audio. Available for: APII.48.D.* Grades: 2-4 Price: \$64.95 Producer: Hartley Courseware, Inc.

Vocabulary Tutor

Helps build vocabulary skills. Uses *Talk/Tutor* development system. **Available for:** RSC.32.C* **Grades:** 4-6 **Price:** \$8.95 **Producer:** Radio Shack.

Word Analysis Skills Series

Five computer-assisted instruction programs on contractions, root words, prefixes, suffixes and syllabication skills. Written for Grade 2-4 reading levels. Available for: APII.32.D, RSIII.32.D, RSI.32.C Grades: 5-12 Price: \$29.95/ea. Producer: Media Materials, Inc.

Word Categories

Five-disk program groups words by category: history, humanities, science/math and literature. Students learn definitions through association with subject area. **Available for:** APII/APII + .32.C/D, PET.8.C **Grades:** 10-12 **Price:** \$75.00 **Producer:** Right On Programs, Computeam, Inc.

Word Elements: Series 1-6

Builds language comprehension by teaching word parts. Five programs and test in each series. **Available for:** APII.16.C/D, PET.16.C/D **Grades:** 5+ **Price:** From \$50.00 **Producer:** Brain Box.

Word Families

The program works with three categories: beginning consonant substitution, final consonant substitution and medial vowel substitution. There are 300 separate presentations. Teacher can modify and create lessons. Available for: APII+.48.D Grades: 1-3 Price: \$29.95 Producer: Hartley Courseware, Inc.

Word Relationships

Five-disk series reviews relationships between pairs of words in analogies. Different vocabulary in each program. Available for: APII/APII + .32, C/D, PET.8.C Grades: 10-12 Price: \$75.00 Producer: Right On Programs, Computeam, Inc.

Word Scramble

Scrambled word game with five levels of difficulty. Allows user to enter new words and store them on disk or cassette. Available for: AT4.16.C, AT8.24.D, APII+.48.D Grades: 1-4 Price: \$20.00 Producer: T.H.E.S.I.S.

Word Structure

Eight-disk series helps students communicate more effectively by providing individualized instruction in basic word analysis. Includes management system that allows print-out of student records. Available for: APII + .48.D Grades: 5-8 Price: \$600.00 Producer: Borg-Warner Educational Systems.

Word Wise Series

Sentence and picture drill lessons designed as sight vocabulary exercises. Three versions available to supplement Houghton Mifflin, Ginn and Harcourt Brace Jovanovich reading series. Available for: APII.48.D Grades: 1-3 Price: * Producer: TIES: Total Information for Ed. Systems.

WordMate

Matches words to make 100 compound words. **Available for:** AT4/AT8.16.C, AT4/AT8.24.D, APII + .48.D **Grades:** 3-6 **Price:** \$25.00 **Producer:** T.H.E.S.I.S.

WordSkill for the Microcomputer

Four competitive games test synonyms, definitions, antonyms and analogies. Available in six levels, corresponding to reading grade levels 7-12. Includes instructor's manual, student record sheets and word lists. Available for: APII/APII+.48.D Grades: 7+ Price: \$150.00 Producer: SRA, Science Research Associates, Inc.

Writing

Cognitive Organizers for Organized Writing

Teaches user to categorize and classify information and so write organized paragraphs. Appropriate for both individual and class use. Teacher may add own material to program. One disk per grade. Available for: RSI/RSII/RSIII.16.D Grades: 2-6 Price: \$1500.00 Producer: Computer Creations Inc.

Coordination

Set of two programs gives practice in combining short sentences so writing flows. Use of appropriate coordinating conjunctions is shown through sentences. **Available for:** APII/APII + .32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$30.00 **Producer:** Right On Programs, Computeam, Inc.

Essential Written Expression Series

Seven computer programs review parts of speech, writing sentences, punctuation and

writing paragraphs. For Grade 2-4 reading level. Available for: APII.32.D, RSIII.32.D, RSI.32.C Grades: 5-12 Price: \$29.95/ea. Producer: Media Materials, Inc.

Excess Words

Program illustrates how to edit writing for conciseness. **Available for:** APII/APII+.32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$15.00 **Producer:** Right On Programs, Computeam, Inc.

Fundamentals of English

Provides tutoring and practice in writing correct, complete sentences. Six chapters with a total of 57 lessons. Tutorial messages guide student's practice. For CCC mini- and microcomputers. **Available for:** * **Grades:** 9 + **Price:** * **Producer:** Computer Curriculum Corp.

Misplaced Modifiers

Provides practice in identifying dangling modifiers and in correcting phrase and clause modifiers to improve clarity of sentences. Available for: APII/APII + .32.C/D, PET.8.C Grades: 7-12 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Poetry Writing

Tutorial program prompts expressive writing in collaboration with the computer. Provides instruction. **Available for:** RSI/RSIII.16.C/D **Grades:** 3-8 **Price:** \$11.95 **Producer:** Cove View Press.

Sentence Beginnings

Helps user improve writing style through varying sentence beginnings. Explains and illustrates use of adverbs, phrases and subordinate clauses. **Available for:** APII/APII+.32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$30.00 **Producer:** Right On Programs, Computeam, Inc.

Sentence Combining Skills

Two-disk package with 14 skill development and four review lessons covering a variety of sentence-combining skills. Includes teacher's guide and booklet of duplication masters with enrichment activities. **Available for:** APII + .48.D **Grades:** 4-8 **Price:** \$95.00 **Producer:** Milliken Publishing Co., Computer Products Div.

Wordy

Three-disk package teaches good writing. Covers circumlocution, vague expressions, redundancy, "it is" constructions, weakening intensifiers, pretentious diction and elaborate constructions. Available for: APII + .48.D* Grades: 11-12 Price: \$100.00 Producer: COMPress, Science Books International, Inc.

Other Language Arts

Acronyms

Generates questions about 1000 + common acronyms and abbreviations. Categories include government, military, technical, athletics and computers. Users can enter own words. Available for: APII.48.D Grades: 8-12 Price: \$25.00 Producer: SEI, Sliwa Enterprises Inc.

Alphabetizing

Alphabetization exercise. Available for: RSI/RSIII.16.C Grades: 2-4 Price: \$10.95 Producer: Little Bee Educational Programs.

Alphabetizing Computer Game

Player arranges words in correct alphabetical sequence within a computer-generated grid. Player selects word list based on level of difficulty. Two versions for Grades 2-5 and Grades 4-8. Available for: APII.48.D Grades: 2-8 Price: \$49.95 Producer: Learning Well.™

Anagrams I through X

Ten cassettes span elementary through college. All provide scrambled words which player must decode within set period of time. Five levels of difficulty per program. **Available for:** Most.16.C **Grades:** 4+ **Price:** \$15.00/ea. **Producer:** Microphys Programs.

Astro Quotes

Anagrams using computer-generated clues. **Available for:** AT.16.D/C, APII.32.D **Grades:** 10+ **Price:** \$23.95 **Producer:** Program Design, Inc.

Beginning Capitalization

The child must decide which of three sentences contains an error in capitalization.

language arts

Includes performance summary. **Available for:** PET.16.C **Grades:** 2-3 **Price:** \$9.95 **Producer:** Micrograms Inc.

Build a Treasury of Words

Twenty-two lessons and five review tests on prefixes and suffixes build spelling, reading, grammar and vocabulary skills. Five disks. **Available for:** APII.16.D, PET.16.D **Grades:** 5+ **Price:** \$297.00 **Producer:** Computer Courseware Services, Div. EMC Publishing.

Capitalization

Drill-and-practice program teaches capitalization rules. Covers capitalization in letter headings, addresses, quotations and names. Includes reproducible activity masters. **Available for:** APII.48.D, RSI/RSIII.32.C/D, PET.16.C/D **Grades:** 4-6 **Price:** \$49.00 **Producer:** Educational Activities, Inc.

Capitalization

Two-disk program presents the rules of capitalization followed by examples and practice. One disk provides practice, the other tests. Student management system. Teacher can modify lessons. Available for: APII + .48.D Grades: 3-8 Price: \$49.95 Producer: Hartley Courseware, Inc.

Capitalization

Three-disk program reviews and tests skills in capitalization. **Available for:** APII/APII+.32.C/D, PET.8.C **Grades:** 7-12 **Price:** \$45.00 **Producer:** Right On Programs, Computeam, Inc.

Capitalization and Punctuation

Two tutorials use examples and games to reinforce basic principles. Correct answers are rewarded, incorrect answers are corrected with no penalty. **Available for:** APII/APII + .32.C/D, PET.8.C **Grades:** 2-4 **Price:** \$15.00/ea. **Producer:** Right On Programs, Computeam, Inc.

Capitalization Contest

Students proofread to locate errors in three lines of text. Three levels of reading diffi-

culty. For two players. Available for: PET.16.C Grades: 3-6 Price: \$9.95 Producer: Micrograms Inc.

Capitals and Comma

Two programs drill and review rules of capitalization and use of commas. Performance is summarized. Sentences may be changed. Available for: PET.8.C/D Grades: 3-7 Price: \$7.95/ea. Producer: Teacher's PET Software.

Code Breaker

Player deciphers encoded messages by unscrambling letters. More difficult levels have word order as well as letters scrambled. Available for: AT8.16.C/D, APII.32.D Grades: 6+ Price: \$23.95 Producer: Program Design, Inc.

Dieting Dinosaur

Vocabulary, spelling and writing skills game. Variation of hangman. Two versions: elementary and middle school. **Available for:** RSI/RSIII.16.C **Grades:** 3-8 **Price:** \$29.95 **Producer:** Curriculum Applications.

Dolphin[™] Language Arts and Reading

Two sets of diagnostic/prescriptive programs that remediate, reinforce or enrich skills. Language Arts reviews grammar, usage and mechanics. Reading reviews vocabulary, comprehension and study skills. Available for: * Grades: 3-8 Price: * Producer: TSC, A Houghton Mifflin Co.

Educational Word Games

Set of five programs builds memory, concentration, reasoning, vocabulary, spelling and writing skills. Uses game formats such as crosswords and word search. **Available for:** APII.48.D **Grades:** 6 + **Price:** \$149.95 **Producer:** Milton Bradley, Educational Div.

Elementary Package III

Four programs provide spelling drill and word recognition games. Available for: RSI/RSIII.16.C/D Grades: 1-6 Price: \$24.95 Producer: Micro Learningware.

English Achievement I-V

Five programs provide practice for the SAT English Achievement Test. They present

sentences containing errors and explain correct answers. Include scoring analysis and teacher's manual. Available for APII.16.D, PET.16.C Grades: 9-12 Price \$39.95/ea. Producer: Microcompute Workshops Corp.

English Fun

Five language arts programs drill vocabulary and spelling using card game, word scramble and guessing game formats. Available for: Most.32.D Grades: 1-8 Price: \$25.00 Producer: Level IV Products, Inc.

Fundamental Word Focus

Provides practice in word analysis skills: alphabetization, prefixes and suffixes, syllabication, compound words, vowels, syllables, etc. **Available for:** RSI/RSIII.16.C, RSIII.32.D **Grades:** 1-9 **Price:** \$165.00 **Producer:** Random House School Division.

Grammar and Writing

Two sets of four disks provide tutorial in grammar skills: parts of speech, sentence patterns, usage and paragraphs. Include teacher's guide and student activities. **Available for:** APII + .D **Grades:** 7-12 **Price:** \$266.00/ea. **Producer:** Encyclopaedia Britannica Educational Corp.

Happy Face

Disk contains four reading and spelling programs: Riddles, Famous Sayings, Nursery Rhymes and Spelling Words. Children guess words or phrases. Sad and happy faces provide reinforcement. Available for: APII + .48.D Grades: 1-6 Price: \$15.00 Producer: Cross Educational Software.

Houghton Mifflin Microcourse Series/Reading and Language Arts

Two supplemental programs that cover the reading and language arts skills most commonly taught in Grades 3-8. Reading program on 114 disks. Language arts program on 136 disks. Available for: IBM.64.D, APII.48.D Grades: 3-8 Price: \$39.75/disk Producer: Houghton Mifflin Co.

Language Arts: Letter Recognition and Alphabetization

Two-disk package develops skills in recognizing upper- and lowercase letters and in alphabetizing by first through fifth



READING SKILLS and MATHEMATICS COURSEWARE SERIES from Scott Foresman and Co., Electronic Publishing Division for grades K-6.

letters. Includes teacher's guide and management system. Available for: APII + .48.D Grades: 1-8 Price: \$75.00 Producer: Milliken Publishing Co., Computer Products Div.

Language Arts/Reading

Eight multitape language arts/reading sets with series of exercises in spelling, vocabulary, punctuation, usage, capitalization, synonyms and beginning reading skills. **Available for:** Most **Grades:** 2 + **Price:** From \$21,00/ea. **Producer:** Micro-Ed, Inc.

Language/Reading Development

Four-disk program develops spelling, vocabulary and reading skills. Emphasizes developing speed while improving perception skills and concentration. Includes synonym, antonym and analogy exercises. Requires printer. Available for: APII/APII+.48.D* Grades: K-12 Price: \$175.00 Producer: Software Technology for Computers.

Languagepack-I

Three programs: Color Guess associates color and color word in a display, Word Flash lets student match a word from memory, Question and Story puts answers to seven questions into random stories. Available for: APII+.16.D Grades: PreK-8 Price: \$24.95 Producer: Ideatech Co.

Milton Bradley Language Skills

Four programs with interactive tutorial and practice in punctuation skills and in vocabulary skills such as context clues, prefixes, suffixes and root words. Includes reproducible worksheets, tests and teacher's guide. **Available for:** APII.48.D **Grades:** 6-8 **Price:** \$44.95/ea. **Producer:** Milton Bradley, Educational Div.

* = Contact producer or distributor

Riddle Me This

Set of three programs, each with three rounds of 12 riddles, uses animated graphics to teach homonyms, contractions and possessives. Self-directing and correcting. Teacher's manual included. **Available for:** APII/APII+.32.D, RSI/RSIII.32.D, RSI.16.C **Grades:** 5-8 **Price:** \$85.25 **Producer:** Data Command, Imperial International Learning Corp.

Story Builder/Word Master

Two programs teach grammar and vocabulary. In *Story Builder* user completes computer-generated verse. In *Word Master* user guesses computer-generated words. **Available for:** AT.8.D/C, APII.32,D **Grades:** 4 + **Price:** \$23.95 **Producer:** Program Design, Inc.

Word Search Puzzle Maker

Creates word search puzzles with user's or program's words. Puzzles can be from 10 x 10 to 40 x 40 characters and are printed on paper. Printer required. **Available for:** AT4/AT8.24.C/D* **Grades:** 1-12 **Price:** \$24.95 **Producer:** Computer's Voice.

Words for the Wise

Five activities: missing letters, scrambled words, alphabetizing, matching letters, hangman. Use any of 1000 prepared word lists or enter own. **Available for:** RSII.16.C/D, APII.48.D **Grades:** 1-6 **Price:** \$34.95 **Producer:** TYC Software.

Languages

Alicia — A Bilingual Reader

Word-by-word test along with special hi-res alphabet allows the student to study a Span-

ish translation of *Alice in Wonderland*. **Available for:** APII.D **Grades:** 5 + **Price:** \$29.95 **Producer:** George Earl.

Astro Word Search: Spanish and French

Computer generates word-search grids, shows player the number of words and keeps score. Both programs come with a separate dictionary. Available for: AT.16.C/D, APII.32.D Grades: 9 + Price: \$32.95/ea. Producer: Program Design, Inc.

Beginner's Russian

A three-program package gives screen displays of Cyrillic letters, detailed instructions on their proper pronunciation and exercises to help the student recognize and speak simple Russian. Available for: RSI.16.C Grades: 5 + Price: \$9.95 Producer: Instant Software™, Inc., Wayne Green, Inc.

Conversational Italian, Spanish, French and German

Each language program consists of five cassettes and a workbook. Includes drills. Stresses phrases and vocabulary commonly used while traveling. Requires ATARI 410™ Program Recorder. Available for: AT4/AT8.16.C* Grades: 5 + Price: \$59.95 Producer: ATARI, Inc., Home Computer Div.

Dieting Dinosaur: Foreign Language Versions

First-year language curricula, with English hints, using *Dieting Dinosaur* format: French Delicacy, Roman Banquet and Spanish Sirloin. Designed for entire class with one computer. Available for: RSI/RSIII.16.C Grades: 7-8 Price: \$19.95/ea. Producer: Curriculum Applications.

English as a Second Language

Tutorial course teaches English to non-English speakers using CCC's Digital Speech System. Vocabulary and grammar introduced in student's first language. Spanish and Mandarin Chinese currently available. For CCC minicomputer. Available for: * Grades: 3+ Price: * Producer: Computer Curriculum Corp.

English as a Second Language

Thirty-two drill-and-practice programs use inductive approach. Based on Defense Lan-

languages

guage Institute work. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 9-12 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Everyday Russian

Three-part package teaches the daily vocabulary travelers need. Includes quizzes. Available for: RSI/RSIII.16.C/D Grades: 5 + Price: \$24.95 Producer: Instant Software™, Inc., Wayne Green, Inc.

Foreign Language Series

Three disks teach French, German, Spanish. Each generates multiple choice questions from data base of 800 words and phrases. User can expand or modify vocabularies. **Available for:** APII.D **Grades:** 8 + **Price:** \$30.00/ea. **Producer:** SEI, Sliwa Enterprises Inc.

Foreign Language Vocabulary Drill: German, French, Spanish

Drill-and-practice program for teaching foreign languages. Includes practice files. Allows creation of additional files. Available for: APII.48.D Grades: 5+ Price: \$24.95 Producer: Compu-Tations Inc.

The French Hangman

Allows student to study French translations of 500 words and 175 sentences, including many proverbs. Uses a special hi-res screen alphabet. **Available for:** APII.D **Grades:** 5+ **Price:** \$29.95 **Producer:** George Earl.

French Verb Conjugations

Drill and practice in verb conjugation given infinitive, pronoun and tense. The student supplies the appropriate verb form. Includes regular and irregular verbs. Available for: PET/CBM.8.C Grades: 8-12 Price: \$15.95 Producer: Tycom Associates.

German and French

Two programs for each language provide noun and verb vocabulary drill, both passive and active. Active modes include translation to and from English and multiple choice format. **Available for:** PET/CBM.8.C **Grades:** 8-12 **Price:** \$19.95/ea. **Producer:** Tycom Associates.

German Package I, II and III

Three packages of five or six programs each provide learning exercises with German parts of speech. **Available for:** RSI/RSIII.16.C/D **Grades:** 9 + **Price:** \$24.95/ea. **Producer:** Micro Learningware.

Krell's Micro Deutsch

Reviews German alphabet, grammar and vocabulary. **Available for:** APII.D, PET.C/D **Grades:** 7 + **Price:** \$179.95 **Producer:** Krell Software Corp.

Practicando Español con La Manza II

Drills verb forms and vocabulary. Vocabulary can be keyed to any textbook. Two-disk package. **Available for:** APII.48.D **Grades:** 7 + **Price:** \$100.00 **Producer:** CONDUIT.

Spanish

Three programs provide noun and verb vocabulary drill and Spanish verb conjugation. Available for: PET/CBM.8.C Grades: 8-12 Price: \$19.95 Producer: Tycom Associates.

Spanish, French, Italian, German Vocabulary Drill

Provide practice in foreign vocabulary with three drills: matching, foreign-to-English and English-to-foreign. Teacher or user enters lessons. Sample lesson included. **Available for:** APII + .48.D **Grades:** 4-12 **Price:** \$24.95/ea. **Producer:** Powersoft Inc.

The Spanish Hangman

Provides practice with 1600 Spanish words and 450 sentences. Includes many idioms. Available for: APII.D Grades: 5 + Price: \$29.95 Producer: George Earl.

Spanish-to-English Phrases, English-to-Spanish Phrases

Tutorial teaches sight words by pictureword association. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 7 Price: \$79.00 Producer: Dorsett Edutional Systems, Inc.

Lesson Writing Systems

AIDS — Authoring Instructional Development System

Two-disk authoring package allow teachers to create their own lessons on an specific subject with graphics. Includes us er's manual. Available for: APII + .48.D Price: \$345.00 Producer: Instructiona Development Systems.

C & S Educator System

Menu-driven programming system for the educator. Helps the teacher create tutorials and maintain student files. Can also be used to generate tests. **Available for:** APII.48.D **Price:** \$150.00 **Producer:** Aquarius Publishers, Inc.

CAIWARE and SUPER-CAI

Two cassette-based authoring systems feature text, multiple choice or fill-in question formats. With *SUPER-CAI*, user can update, copy and compress lessons on the cassette tape. Credit given toward upgrading to disk-based versions. **Available for:** RSI/RSIII.32.C **Price:** From \$42.95 **Producer:** MicroGnome, Fireside Computing, Inc.

CAIWARE-2D and CAIWARE-3D

Two disk-based authoring systems allow teachers to develop their own computer-based lessons. *CAIWARE-3D* includes features for computer-managed instruction. Compatible with cassette-based versions: *CAIWARE* and *SUPER-CAI*. **Available for:** RSI/RSIII.32.D **Price:** From \$125.00 **Producer:** MicroGnome, Fireside Computing, Inc.

Can-8

Lets Honeywell user develop computerbased lessons. Includes a test item data bank. Available for: * Price: * Producer: Honeywell Information Systems Inc.

CATS-80

Instructional authoring system for Intelligent Systems 3651 computer. Uses

color and graphics, maps, charts, diagrams and some animation. Special package for the hearing impaired. Available for: *Price: \$2995.00 Producer: Intelligent Systems Corp.

CDP System

Permits teachers to create drill-and-practice lessons on the computer. Includes system disk, two blank disks and documentation. Available for: APII.48.D, RSI/RSIII.C Price: \$75.00 Producer: Aquarius Publishers, Inc.

The Eureka™ Learning System

Helps teachers without programming experience develop computer-assisted instruction in any subject. Includes teacher's guide, tutorial on using the system, demonstration lesson disk and program disk. Available for: APII.48.D Price: \$495.00 Producer: Eiconics, Inc.

Exam Generating System

Menu-driven program lets instructor create question file and exams. Teacher can enter tutorial materials (up to 140 characters) from which the computer generates questions when the student makes a mistake. Available for: CBM.32.D Price: \$200.00 Producer: Microphys Programs.

E-Z PILOT

Creates lessons with 10 instructions. Allows presentation of material, acceptance of input, judging correctness of response, scorekeeping and presentation of graphics. Available for: APII.48.D Price: \$34.95 Producer: Teck Associates.

GENIS

Curriculum development package lets nonprogrammer create computer-based lessons. System presents information, asks questions and processes responses. Documentation, tutorials and reference card included. **Available for:** APII + .48.D **Price:** \$300.00 **Producer:** Bell & Howell Co.

GenWriter III Course Authoring System

Allows non-programmers to write multibranching computer programs for interactive video. Telephone consultation. **Available for:** APII.48.D.* **Price:** \$595.00 **Producer:** General Technical Corp.

The Ghostwriter

Lets user create interactive video or computer-based lessons. Graphics, scoring and management capabilities. Requires video cassette recorder and 16K RAM card. Includes special board. Available for: APII+.48.* Price: \$2995.00 Producer: Cavri Systems, Inc.

Hartley's Create Series

Five programs that allow teachers to create their own computer-based lessons. Series includes vocabulary, spelling and fill-in-the-blank programs. Hartley's Cassette Control Device needed. **Available for:** APII + .48.D* **Price:** \$26.95/ea. **Producer:** Hartley Courseware, Inc.

Individual Study Center

User can choose from six formats to create question-and-answer lessons on any subject. Fifty-six prepared lessons also available. Available for: RSI.C, RSIII.16.D, APII.16.C/D Price: \$69.95 Producer: TYC Software.

The Instructor

Authoring system allows non-programmers to create interactive video lessons. To be used with BCD video interface. Service hotline available. Available for: APII/APII+.48.D* Price: \$395.00 Producer: BCD Associates, Inc.

The Light Pen Quiz

Teacher uses light pen (purchased separately) to create student quizzes. Available for: APII.48.D* Price: \$49.95 Producer: Charles Mann and Associates, Microsoftware Div.

Mathword

Author system specifically for math. Creates lessons that provide logic, thinking skill and word problem practice. Available for license. Also prepared lesson packs for \$40.00 each. Available for: APII/APII+.48.D Grades: 2-16 Price: * Producer: Apple for the Teacher.

Microteach

Menu-driven program lets user write courses or exams in English or Spanish. Grades answers automatically and lists results for each student. Five different question formats available. Available for: AT8.48.D*, APII.48.D* Price: \$275.00 Producer: COMPUMAX, Inc.

Micro Test™

Menu-driven test generation program. Users can create, edit and update their own test files or files provided by publisher and can select test questions based on predetermined criteria such as question type and level of difficulty. **Available for:** APII + .48.D*, * **Price:** \$295.00 **Producer:** Chariot Software Group.

Msss D Authoring System

Lets teachers produce tests for individual students. Can be used with or without Msss D Interface to audiovisual projectors. Available for: APII Price: \$125.00 Producer: Msss D, Inc.

Multiple Choice Files

Program allows the user to create, save and retrieve multiple choice tests. Provides up to five choices for each question. **Available for:** APII.48.D **Price:** \$24.95 **Producer:** Compu-Tations Inc.

Multiple Choice Questions

User enters a list of 10 questions with three possible answers each. Saves student test results for later review. Available for: TIA.C/D Price: \$14.95 Producer: Microcomputers Corp.

Omnitest

Computer-managed test package lets teacher build question-and-answer files on any subject. Drill or quiz game modes. Includes sample files, quizzes on the states and user's manual. Available for: APII + .48.D Price: \$39.95 Producer: Educational Computing Systems, Inc.

Q & A

Presents up to 20 random questions. Scores students and provides correct answer after student guesses incorrectly twice. Students can create quizzes for classmates. Available for: PET.8.C/D Price: \$7.95 Producer: Teacher's PET Software.

Question/Answer and Vocabulary Facilities — Authoring

Two authoring programs: Micro Quest creates question-and-answer lessons. Vocab allows teachers to enter word lists for a set of programs. Available for: APII.32.D Price: * Producer: TIES: Total Information for Ed. Systems.

* = Contact producer or distributor

lesson writing systems

Quick Quiz: A Mini-Authoring System

Teachers can create, store and give multiple choice tests using TRS-80 computer. Up to 40 questions with four answer choices per question. Available for: RSIII.32.D Price: \$29.95 Producer: Radio Shack.

Quiz

A quiz authoring system that creates true/false, multiple choice, exact answer and short answer questions. Produces answer keys along with tests. Requires no programming knowledge. Available for: APII.32.D*, RSI/RSIII.32.D* Price: \$159.95 Producer: Integrated Futures.

Study Quiz Files

Enables non-programmers to create, save and retrieve quizzes on any subject. Repeats questions until material is mastered. **Available for:** APII.48.D **Price:** \$24.95 **Producer:** Compu-Tations Inc.

Surpas

System allows non-programmers to write computer-based lessons with graphics. **Available for:** APII.48.D* **Price:** From \$99.00 **Producer:** JMScandura Associates, Instructional Micro Systems, Inc.

Teacher Create Series

Five-disk set allows teachers to create completion, multiple choice, matching and true/false tests. Disks available individually or as a set. **Available for:** APII.48.D **Price:** \$140.00/set **Producer:** Educational Courseware.

Teacher's Aide

Allows non-programmer to create and store question-and-answer lessons on any subject. Available for: RSI.16.D Price: \$39.95 Producer: Instant Software™, Inc., Wayne Green, Inc.

T.E.S.T.

Allows user to create true/false, multiple choice and completion questions for use as

review or scored test. Can also print test with answer key. **Available for:** RSI/RSIII.16.C/D **Price:** \$24.95 **Producer:** TYC Software.

The Test Bank

Authoring system stores test items, retrieves, renumbers and prints them. Produces separate answer key. Available for: RSIII.48.D* Price: \$450.00 Producer: Advanced Technology Applications.

Tic Tac Show

Lets non-programmer create multiplayer games that simulate TV game show formats. Uses color graphics and sound. Available for: APII/APII+.48.D Price: \$39.25 Producer: Computer-Advanced Ideas Inc.

TI-Tester and TI-Tester, Hebrew Version

Two programs, each of which lets user create spelling, vocabulary or other language tests with own word lists. **Available for:** TIA.C/D **Price:** \$14.95 **Producer:** Microcomputers Corp.

Torricelli Author

Allows non-programmer to create courses including tests on any subject. Includes operations guide and two sample courses. Available for: * Price: \$295.00 Producer: The Answer in Computers.

TRS-80 Author I

Allows teachers without computer experience to create computer-based materials. **Available for:** RSIII.32.D **Price:** \$149.95 **Producer:** Radio Shack.

TRS-80 MicroPILOT™

Allows user to create or adapt courseware from curriculum suitable for computer-based instruction. **Available for:** RSI.32.D **Price:** \$79.95 **Producer:** Radio Shack.

Tutorial Learning System

Authoring system creates tutorial lessons, test items, hi-res graphics, shape tables and simple animation. Requires no programming knowledge. Available for: APII.48.D, RSI/RSIII.48.D Price: \$179.95 Producer: Integrated Futures.

Word Wise - Authoring

Allows teachers to create individualize sentence lessons, picture lessons and st dent menus for reading students. Availab for: APII.48.D* Price: * Producer: TIE: Total Information for Ed. Systems.

Word Wise — Pictures

Series of 29 disks that may be used with th TIES Word Wise Authoring Package to create picture lessons. Available for APII.48.D Price: * Producer: TIES: Tota Information for Ed. Systems.

Wordsearch

Lets teachers create wordsearch lessons. Requires a printer. Available for: APII+.48.D.* Price: \$26.95 Producer: Hartley Courseware, Inc.

Z.E.S. System

Four-disk package lets user create or amend lessons, Cartesian graphs, data frames and student records. Animation and student recordkeeping features. Teacher-created Z.E.S. lessons in specific subjects available separately. Available for: APII/APII+.48.D Price: \$250.00 Producer: Avant-Garde Creations.

Life Skills and Guidance

A-1 Home Handy Hints

Home management program appropriate for home economics classes. Covers personal finance, energy efficiency, shopping, cooking, home maintenance. **Available for:** RSI/RSIII.16.C **Grades:** 6-12 **Price:** \$13.83 **Producer:** Modtec.

Comparative Buying

Four-disk consumer-oriented program with tutorial in concepts of comparative buying and simulations of buying decisions. Includes teacher's manual. Available for: APII.48.D Grades: 5-12 Price: From \$165.00 Producer: Interpretive Education, Inc.

Computerized Career Information

Career game lets students explore jobs in their areas of interest. Covers worker traits for 240 jobs. Job descriptions included. Local and state data may be added to the federal data provided. Available for: RSIII.48.D, APII.48.D Grades: 7-12 Price: \$375.00 Producer: Bertamax, Inc., Micro School Programs.

Contemporary Living

Guidance series includes: Friends and You, The Age of Responsibility, Map Reading, Succeeding, Decision Making and The Law. Available individually. Available for: APII.48.D, RSI/RSIII.16.C Grades: 9-12 Price: \$175.00 Producer: Aquarius Publishers, Inc.

Essential Study Skill Series

Two sets of programs, each containing over an hour of computer-assisted instruction and supplemental practice workbooks. Using everyday examples, lessons review a variety of graphs and tables. Written for Grade 2-4 reading level. Available for: APII.32.D, RSIII.32.D, RSI.32.C Grades: 5-12 Price: \$29.95/ea. Producer: Media Materials, Inc.

Exploring Careers

Career guidance system. Provides information about interest areas, work groups and jobs. Matches student interest and ability profiles to work groups. For CCC minicomputer. Available for: * Grades: 10+ Price: * Producer: Computer Curriculum Corp.

Guidance Information System[™] (GIS)

User supplies personal information and receives list and/or description of appropriate career, college and financial aid. Special options include information on local career opportunities. For Dolphin computer. **Available for:** * **Price:** * **Producer:** TSC, A Houghton Mifflin Co.

Hoffman Career Center Program

Computer-administered and -evaluated. Interest inventory directs students to career choices and detailed career data. Requires printer. Available for: APII+.48.D*, AT8.D* Grades: 7+ Price: *Producer: Hoffman Educational Systems.

Home Safe Home

Four-disk program uses animated color graphics in tutorial on the characteristics

and prevention of fires, shocks, falls and poisons. Includes teacher's manual. **Available for:** APII.48.D **Grades:** 3-12 **Price:** From \$165.00 **Producer:** Interpretive Education, Inc.

Income Meets Expenses

Eight-disk program provides tutorial and practice in personal budgeting concepts. Branches for fifth-, third- and second-grade reading levels. Includes teacher's manual. **Available for:** APII.48.D **Grades:** 5-12 **Price:** From \$340.00 **Producer:** Interpretive Education, Inc.

Job Readiness — Assessment and Development

Four-disk program provides information to develop job readiness attitudes and practical knowledge in filling out applications, interviewing and locating jobs. Branches for sixth- and third-grade reading levels in testing and sixth-, fourth- and third-grade levels in tutorial. Includes teacher's manual. Available for: APII.48.D Grades: 7-12 Price: From \$165.00 Producer: Interpretive Education, Inc.

Lifeskill Reading Series

Eight disks cover reading signs, purchasing food, traveling, banking and reading the newspaper. Duplicating masters also included. For Grade 2-4 reading level. **Available for:** APII.32.D, RSIII.32.D, RSI.32.C **Grades:** 7-12 **Price:** \$29.95/ea. **Producer:** Media Materials, Inc.

Mind-Memory Improvement and Study Skills Course

Uses graphics to present a method of memorizing facts. Teaches study and listening skills. **Available for:** APII, RSI/RSIII.16.C/D **Grades:** 6+ **Price:** From \$26.50 **Producer:** TYC Software.

Money Management Assessment

Four-disk diagnostic program assesses basic math skills, vocabulary and money management concepts. Designed for pre- and post-testing. Branches for fifth- and second-grade reading levels. Includes teacher's manual. Available for: APII.48.D Grades: 5-12 Price: From \$165.00 Producer: Interpretive Education, Inc.

Personal Consumerism

Eight programs: Tips on Buying a Used Car, Reading an Ad, Consumerism and You, Shopping in a Comparative Way, Laws for Consumers, Consumer Fraud, Consumer Help and Understanding Packaging. Also available individually. Available for: APII.D, RSI/RSIII.C Grades: 9-12 Price: \$235.00 Producer: Aquarius Publishers, Inc.

Personal Finance

Seven programs: How to Finance a Car, Money, All About Interest, Metrics and You, Eating for Good Health, You and Insurance, and Credit. Also available individually. Available for: APII.D, RSI/RSIII.C Grades: 9-12 Price: \$199.00 Producer: Aquarius Publishers, Inc.

Poison Proof Your Home

Five-disk program provides tutorial on categories of poisons, prevention and treatment of poisoning. Includes teacher's manual. **Available for:** APII.48.D **Grades:** 3-12 **Price:** From \$210.00 **Producer:** Interpretive Education, Inc.

Secondary Reading Efficiency System

Remedial reading at two levels, Grades 2-6

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and 6+. Mature content. Multilevel instruction. Computer management for teacher and student. Available for: APII.48.D, RSI.48.D, PET.48.D Grades: 2+ Price: \$1495.00 Producer: Computer Assisted Instruction, Inc.

Survival Math

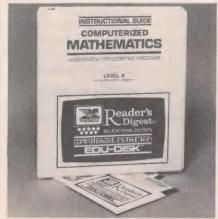
Four simulations provide practice in applying math skills to everyday life: Smart Shopper Marathon, Hot Dog Stand, Travel Agent Contest, Foreman's Assistant. Available For: APII.32.D, RSI/RSIII.16.C Grades: 4+ Price: \$50.00 Producer: Sunburst Communications.

Survival Skills

Basic reading and mathematics skills applied to everyday materials and situations: health and nutrition, consumer skills, employment, personal finance, information sources, travel and entertainment. For CCC mini- and microcomputers. Available for: * Grades: 9 + Price: * Producer: Computer Curriculum Corp.

Work Series

Five programs help students develop job search skills. Includes: How to Get and Hold a Job, The Job and You, Self-Concept and Your Job, Part-Time Jobs and Interviewing. Also available separately. Available for: APII.48.D, RSI/RSIII.16.C Grades: 9-12 Price: \$175.00 Producer: Aquarius Publishers, Inc.



Eight-disk Diagnostic/Prescriptive System from Readers Digest Services, Inc. for classroom management.

You Can Bank On It

Six-disk program combines practice exercises with tutorial on the concept of a bank, banking services, opening accounts and writing checks. Branches for fifth, third- and second-grade reading levels. **Available for:** APII.48.D **Grades:** 5-12 **Price:** From \$285.00 **Producer:** Interpretive Education, Inc.

Management

Administration

The Administrators' Apple Package

Package of six disks for attendance, scheduling, demographic and textbook systems. Includes word processing capability. Keeps records for up to 1200 students. Available for: APII.48.D* Price: \$300.00 Producer: D. J. Simair, Inc.

Attendance Package

Maintains the absentee status for up to 2100 students. Data can be referenced by grade, student, sex, age and ethnic background. Includes digital bar-code reader, graphics option for Epson printer and user's manual. Requires 56K of RAM and 250K of disk storage. Available for: * Price: \$1125.00 Producer: Micro Computer Service, Inc.

Attendance System

Maintains daily and cumulative student absentee records. Room for annotation on printed daily attendance bulletin. Computes school and grade level statistics. Requires printer. Training available. Available for: CBM.32.D* Price: \$800.00 Producer: Microphys Programs.

Budget Management

Stores budget, requisition and check information. Provides budget status, current expenses, year-to-date expenses, and encumbered amounts and balances. Requires 130K of disk storage. Available for: * Price: \$699.00 Producer: Metier.

Bursar

Student activities fund accounting system. Tracks over 200 extracurricular activities.

Available for: APII.48.D, RSI/RSIII.48.D Price: \$195.00 Producer: Addison-Wesley Publishing Co., School Div.

The Class Scheduling Program

Matches student requests with available courses for up to 2400 students and 1000 courses at a time. Tests proposed course scheduling for conflicts. Sets priorities for required courses. Available for: APII.48.D Price: \$349.95 Producer: Charles Mann and Associates, Microsoftware Div.

CommuniTree, First Edition

Software turns Apple or CP/M-based computer into a conferencing system, public bulletin board or private message system. Can be accessed by any computer or terminal. Requires Hayes Micromodem or Smartmodem. Available for: APII/APII+.48.D, * Price: From \$120.00 Producer: CommuniTree Group.

District-Wide Educational Assessment Test Scoring

Corrects multiple choice tests and correlates objectives with specific performance indicators. Gives print-out for individual students, schools and districts. Available for: Most.56.D* Price: \$995.00 Producer: Applied Educational Systems.

Educational Management Series — Module I: Grade Reporting

Calculates and maintains data on students, courses, instructors and enrollment. Covers honor points, pass/fail grades, cumulative credits, incompletes, transfers. Requires Super Kram Card and 132-character printer. Available for: APII + .48.D* Price: \$250.00 Producer: UNICOM Div. United Camera, Inc.

Educational Management Series — Module II: School Inventory

Resource management program includes a complete library circulation system. Includes disk with sample data that can be used as part of a tutorial. Requires Super Kram Card and 132-character printer. Available for: APII+.48.D* Price: \$250.00 Producer: UNICOM Div. United Camera, Inc.

E.P.I. Management System

Allows user to access over 5000 materials from hundreds of publishers. Sorts material

by skill area, format, grade level, modality, teacher-learner interaction and five other characteristics. Can be customized. Available for: APII.48.D Price: From \$325.00 Producer: Database for Education.

Equip

School equipment inventory system. Allocates, locates and accounts for all capital equipment in a system. Available for: APII.48.D, RSI/RSIII.48.D Price: \$195.00 Producer: Addison-Wesley Publishing Co., School Div.

ESM-100 Administrative System

Complete administrative system for keeping individual student records and class schedules. Includes manual. Available for: Most Price: \$1595.00 Producer: Educational Software & Marketing Co.

Fast File

High-speed data base management program allows user to set up an electronic file system. Available for: CBM.D Price: \$99.95 Producer: CGRS Microtech, Inc.

FORMS

MicroSOFT BASIC program for filling in forms. Features editing, justification and use of separate data files. Requires CP/M-based system, disk drives and printer. User's manual included. **Available for:** Most.D* **Price:** \$40.00 **Producer:** Elliam Associates.

Grade Reporting System

Processes and produces report cards and all end-of-term reports, including honor rolls and grade-point averages. Requires 56K of RAM and printer. Available for: * Price: \$1495.00 Producer: Applied Educational Systems.

The Grading Systems Program

Maintains class rosters, student files, master records, report cards and teacher schedules for unlimited number of classes. Incorporates guidance management system. Prints records. Requires 80-column printer. Available for: APII.48.D* Price: \$299.95 Producer: Charles Mann and Associates, Microsoftware Div.

Mail List

User can create, modify, sort and print a mail list of over 1000 names. Each file uses

up to 10 user-defined fields. Requires UCSD Pascal. Available for: APII.64.D* Price: \$29.95 Producer: Edu-Soft, Steketee Educational Software.

Mailing List Program

Maintains mailing list of up to 700 names and addresses. Includes full editing system and requires a printer. **Available for:** APII.48.D*, RSI/RSIII.32.D, PET.16.C/D **Price:** \$19.95 **Producer:** Educational Activities, Inc.

Micro-Banner

Program produces banners for posting messages around the school. User types in desired message and the printer creates a banner using block letters $3\frac{1}{2}$ x 4 in. or 4 x 7 in. **Available for:** APII.48.D* **Price:** \$25.00 **Producer:** Right On Programs, Computeam, Inc.

Micro-General Ledger

Accounting system for non-accountants. Produces daily, month-end and year-end reports. Available for: APII/APII + .48.D* Price: \$99.95 Producer: Serendipity Systems. Inc.

Micro-Inventory

Inventories up to 1200 items. Reports on all items on file, all in hand, all on order, items at or below restocking level, month-to-date and year-to-date sales. **Available for:** APII/APII + .48.D* **Price:** \$99.95 **Producer:** Serendipity Systems, Inc.

PIAT-80, Detroit-80 and WISCR-80 Diagnostics

Three computerized diagnostic guidance programs: Peabody Individual Achievement Test, the Detroit Test of Learning Aptitude and the Wechsler Intelligence Scale for Children Revised. Includes manuals. Available for: RSI/RSII/RSIII.32.D, APII + .32.D Price: \$149.00/ea. Producer: Precision People, Inc.

Project Attend

Monitors and evaluates student attendance data, period by period, for schools of any size. Produces reports for district and school administrators, parents and teachers. Requires printer and autofeed mark sense card reader. Available for: APII.48.D*, CBM.32.D* Price: \$1995.00 Producer: Evans Newton Inc.

Project Management

Accounting system for individual projects lets user estimate and revise budgets, meet grant requirements, review costs to date and periodically estimate completion costs. Prints budgets, costs to date. Available for: APII/APII + .48.D Price: \$99.95 Producer: Charles Mann and Associates, Microsoftware Div.

Purchase

Annual school purchase system simplifies bulk purchases. Sets specifications, quantities, price. Prints forms and requisitions. **Available for:** APII.48.D, RSI/RSIII.48.D **Price:** \$195.00 **Producer:** Addison-Wesley Publishing Co., School Div.

Rekord

Data-base management system in three versions: Administrator, Counselor, Coordinator of Special Programs. Files, stores and prints student data, school records and reports. Available for: APII/APII + .48.D.*, RSIII.48.D.* Price: \$495.00/ea. Producer: The Psychological Corp.

Salary Development Programs

Five programs help educators develop salary schedules and compute total salary costs. **Available for:** RSIII.C **Price:** \$9.95 **Producer:** Bill White.

Scheduling-Update System

Manages changes in student schedules. Prints add/drop forms, class lists, student schedules. Generates class counts and school course directory. Requires printer. Available for: CBM.32.D* Price: \$700.00 Producer: Microphys Programs.

Scheduling/Attendance Package

Software for class scheduling and attendance. Available for: CBM.D.* Price: * Producer: Cow Bay Computing.

School Attendance Program

Handles records for up to 2600 students. Prints letters to parents and admissions slips. Displays data on screen or printer. Manual and demonstration disk available. Available for: RSII.64.D*, RSIII.48.D* Price: From \$350.00 Producer: Bertamax, Inc., Micro School Programs.

* = Contact producer or distributor

management

School Management Applications

Administrative package covers such tasks as recording and reporting student, class and attendance data, and maintaining payroll, personnel and accounting data. Available for: APII.D* Price: From \$250.00 Producer: Scott, Foresman and Co., Electronic Publishing Div.

Teacher's Bank Account Manager

Maintains bank balances and provides easy reconciliation with bank statements. Can search for transactions by type, check number, date, description, amount and status. Schools can use for budget and cash flow analysis. Available for: APII+.48.D Price: \$49.95 Producer: Educational Computing Systems, Inc.

Ultra Plot/DIF/DataGraph

Lets users of software such as VisiCalc and DB Master create pie, scatter, bar and stack bar charts as well as U.S. maps, line graphs and hi-low graphs. Available for: APII.48.D Price: \$99.00 Producer: Avant-Garde Creations.

Classroom

Advice

An information system in which the teacher can store advice about remedial help by objective or concept. The student can ask for advice for an objective or concept. **Available for:** APII.D, RSI/RSIII.D **Price:** \$139.95 **Producer:** Integrated Futures.

A.E.N. Grading System

Alphabetizes, calculates and grades student records using number or letter grades. Package includes demos, manual and tutorial sheet. Available for: APII.48.D Price: \$70.00 Producer: Avant-Garde Creations.

The Apple Grade Book

A management system for teachers of all grades for recording grades, averages, activity record and class lists. Manual included. **Available for:** APII.48.D **Price:** \$34.50 **Producer:** J & S Software.

Apple Grading System

Two-disk grading system for teachers. Includes instruction booklet. **Available for:** APII + .48.D **Price:** \$20.00 **Producer:** Teaching Computer Programming.

Applepack Grader

Classroom management system maintains class lists and grade statistics. Available for: APII/APII + .48.D Price: \$60.00 Producer: Science Software Systems, Inc.

Attendance

Manages attendance records. Can be used with Charles Mann's grading and/or class scheduling software. Available for: APII.48.D Price: \$299.95 Producer: Charles Mann and Associates, Microsoftware Div.

CAI Manager

Maintains test and assignment records for a large number of students. Has built-in authoring system and math instruction program. Can maintain records from almost any Apple software. Requires hard disk. Available for: APII.* Price: \$1500.00 Producer: Mathware.

CLASS — Computerized Learning and Scoring System

Curriculum management system that parallels Holt's math and reading basal programs for Grades 1-8. Scores tests, prescribes lessons from the basal programs and tracks student mastery. Produces 14 different reports. Available for: Most.* Price: \$1995.00 Producer: Holt, Rinehart & Winston, Inc., School Dept.

Classfile

Classroom recordkeeping programs with options such as list of all students and their grades, list of students with grades below cut-off point and averages. Disk version includes report to parents. Available for: RSI/RSIII.16.C/D Price: \$49.95 Producer: TYC Software.

The Classroom Answer

Instructional management system for one class of up to 35 students. Can score and grade tests, identify problem areas and suggest supplementary materials. For use with the Houghton Mifflin Reading And Math Programs. Available for: APII.*

Price: *Producer: Houghton Mifflin Co.

Classroom Management System: Mathematics

Diagnostic and prescriptive system gen ates individualized lessons, tests and progress reports. Two levels: Grades 1-3 a Grades 4-8. Teacher, student and resear packs sold separately or as set. Availat for: APII + .48.D, AT8.32.D* Pric From \$100.00 Producer: SRA, Scien Research Associates, Inc.

Compugrade

Management system allows teachers average semester's grades in seconds, giv various weights to specific assignments, us curves and make class summaries. Wi save and reload class files from disk. Avai able for: APII.D Price: \$50.00 Produce Right On Programs, Computeam, Inc.

Computerized Instructional Management System (CIMS)™

Based on the mastery learning approach to instruction. Provides educators and parents with the information needed for pupil success in the basic skills. Requires scanner and printer. Available for: Most.64.D* Price: * Producer: Institute for Applied Human Resources.

Computerized Management Systems in Reading and Math

Over 1000 diagnostic/prescriptive tests keyed to behavioral objectives and correlated with major basal programs. Automatically scored by Zweig Mark Reader. Provide print-outs and compile performance records. For Grades 1-6. Available for: APII+.48.D*, RSIII.48.D*, PET.32.D*

Price: \$25.00/ea. Producer: Zweig Associates, Inc., Skillcorp Publishers, Inc.

COMS

Customized instructional management system for use with any subject. Handles 780 objectives and an unlimited number of students. Used with individualized, self-paced instruction modules. Handles pre- and posttests for each module. **Available for:** APII + .D* **Price:** \$2000.00 **Producer:** Educational Research and Innovations.

The Electric Grade Book

Teacher's record of class and individual student performance. Provides summaries throughout the course. Available for: APII.48.D Price: \$46.95 Producer: Charles Mann and Associates, Microsoftware Div.

Electronic Grade Book

Assists teacher in grade averaging using weighted number or letter grades. Program generates reports to parents and students. Suggests work student must do to earn a specific grade. Available for: AT4/AT8.32.C, AT4/AT8.40.D Price: \$64.95 Producer: Computer's Voice.

Exam Analysis System

Analyzes standardized or teacher-produced tests. Menu-driven program allows teacher to enter answer key. Provides mean and standard deviation analyses and item analysis. Can be used as diagnostic tool. Available for: CBM.32.D Price: \$200.00 Producer: Microphys Programs.

Fry Readability Formula

Uses Fry Readability Formula to determine reading grade level of any material entered into the computer. Available for: APII.48.D Price: \$45.00 Producer: Jamestown Publishers.

Grade Averages and Readability Index

Grade Averages calculates numeric or letter grades and furnishes class ranking. Readability Index determines a passage's readability using the Bormuth Formula. Available separately or on one disk. Available for: APII.48.C/D, RSI/RSIII.32.D, PET.16.C/D Price: From \$11.95 Producer: Educational Activities, Inc.

Grade Book

Maintains grade records. User can enter and change class lists, enter marks for students in three formats, curve marks, average marks and obtain reports. Requires UCSD Pascal. Available for: APII.64.D* Price: \$29.95 Producer: Edu-Soft, Steketee Educational Software.

Grade Storage Diskette

Allows teacher to record and store students' scores from many Educational Activities programs simultaneously. **Available for:** APII.48.D, RSI/RSII.32.D, PET.16.C/D **Price:** \$11.95 **Producer:** Educational Activities, Inc.

Grader

Averages numerical or letter grades. Available for: PET.8.C Price: \$9.95 Producer: Micrograms Inc.

Grades

Computes mid-term or end-of-term grades for up to 40 students in up to 10 different subject areas. Allows weighting factors. Will compute percentage and letter grades. Gives grade distribution by student or subject. Available for: PET.16.C/D Price: \$7.95 Producer: Teacher's PET Software.

Hoffman Test Scoring

Classroom-level test scoring and specific skills-management system. Available with Hoffman tests or tailored to school district needs. Requires printer. Available for: APII + .* Price: * Producer: Hoffman Educational Systems.

EQUIPMENT CODES

Example:

Available for: APII.48.D

Machine	codes	used
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Machine codes used:	
Apple I	API
Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
Minimum internal memory:	
4K bytes	4
8K bytes	8
16K bytes	16
etc.	
Minimum marinharala mandada	
Minimum peripherals needed:	C
Cassette player Disk drive	D
Disk drive	D

Instructor Gradebook

Contact producer

Creates and maintains grading records for several hundred students. Handles both numeric and letter grades. Provides averages, standard deviations, high/low grades, medians. Available for: APII/APII+.48.D* Price: \$79.95 Producer: Serendipity Systems, Inc.

Inter-Stat

Statistical analysis program computes average, standard deviation, median, student T-test, Mann-Whitney U-test, Chi-Square contingency table, regression and correlation, among others. **Available for:** APII/APII + .48.D* **Price:** \$99.95 **Producer:** Serendipity Systems, Inc.

LUSystems DPS and DPS PLUS

Diagnosis and prescription systems for language arts and math. Programs generate individual learning prescriptions and mastery profiles. Cross-references to basal texts. Mastery tests for each objective included. Available for: RSII.64.D, APII.48.D*, * Price: From \$495.00 Producer: Learning Unlimited Corp.

Management System for Heath Mathematics Program

System for teachers that tests, scores and prescribes remediation. Also prints various reports for both school and home use. Available for: APII.*, RSIII.* Price: * Producer: D.C. Heath and Company.

Mathematics Assessment/ Prescriptive Edu-Disks

Eight-disk diagnostic/prescriptive system. Covers seven proficiency levels. Includes tutorials, post-tests and a disk correlating program objectives to nine leading basal texts. Includes management system for 100 student files. **Available for:** APII.48.D, RSIII.48.D **Price:** \$129.90/ea. **Producer:** Reader's Digest Services, Inc., Educational Div.

Micromanagement System for Tests

Correlates with Phoenix Edition of HBJ's Language for Daily Use basal series. Records scores and provides prescription. Includes pre-, post-, mid- and year-end tests at each level. Test booklets available separately. Available for: APII.48.D, RSIII.48.D Price: \$60.00 Producer: Harcourt Brace Jovanovich, School Dept.

MicroScore

Menu-driven package enables instructor to maintain all student attendance records, grades, exam scores, statistical averages of test scores and test items analysis. Available for: APII + .48.D*, * Price: \$295.00 Producer: Chariot Software Group.

management

MMICRO

Microcomputer Managed Information for Criterion Referenced Objectives — Reading, Math, Language Arts. Collects, analyzes, stores and delivers instructional information. Can be custom designed. Available for: Most.* Price: From \$2495.00 Producer: Educational Development Corp.

Periodic Tests/Microcomputer Version

Correlates with HBJ's Bookmark Reading Program, a K-8 basal series. Speeds diagnostic/prescriptive evaluation and stores individual and class records. Includes tests, machine scorable answer cards and teacher's edition. Two versions, one each for 1979 and 1983 editions. Available for: APII.48.D, RSI/RSIII.48.D Price: From \$45.00 Producer: Harcourt Brace Jovanovich, School Dept.

Programs for Teachers

Five aids for teachers: Test Writer, Instructional Management System, Reading Level Analysis, Gradekeeper, Comparison. Programs priced individually. Available for: RSIII.* Price: From \$39.95 Producer: Bertamax, Inc., Micro School Programs.

Project Basic

Monitors any objectives-based curriculum. Tracks and evaluates student progress on individual to district-wide objectives. Requires printer and mark sense card reader. **Available for:** APII.48.D*, RSIII.48.D*, PET.32.D* **Price:** \$1995.00 **Producer:** Evans Newton Inc.

Readability

Utility program for teachers, librarians and curriculum specialists produces reading grade level scores according to nine formulae, including Dale-Chall, Flesch and Holmquist. Results displayed graphically. Includes user's manual. **Available for:** APII + .48.D **Price:** \$44.95 **Producer:** Micro Power & Light Co.

Readability Analysis

Calculates reading levels using Spache, Dale-Chall, Raygor, Fry, Flesch, Gunning-Fog and Smog formulae. Displays graphic comparison of the various tests. Requires entry of 100-word sample text. **Available for:** APII + .48.D* **Price:** * **Producer:** TIES: Total Information for Ed. Systems.

Readability Index

Enables the user to determine a passage's readability level with the Bormuth Formula. Uses average word length, average sentence length and word difficulty estimation. Also part of the program *Grade Averages*. Available for: APII.48.D, RS.32.C/D, PET.16.C/D Price: \$14.95 Producer: Educational Activities. Inc.

Scholastic Information Management System I and II

Two programs. Each handles all aspects of student attendance, class scheduling and grading. *System II* has enhanced scheduling capability. **Available for:** RSII.D* **Price:** From \$1495.00 **Producer:** TR Software.

SCORE: The Academic Assistant

Library of programs that keeps academic records and analyzes multiple choice tests. Accepts data from student-marked card via optical mark reader. Requires printer. Available for: APII+.48.D* Price: \$395.00 Producer: Scientific Software Associates, Ltd.

Scott, Foresman Mathematics Course Manager

Management system for Scott, Foresman mathematics texts. Tracks chapter, unit and final test scores. Outlines student strengths and weaknesses. Provides prescriptions and stores up to 49 tests for 40 students. Available for: APII.D* Price: \$450.00 Producer: Scott, Foresman and Co., Electronic Publishing Div.

Test Tabulator

Computes scores and tabulates results of true/false or multiple choice tests. Available for: PET.8.C Price: \$9.95 Producer: Micrograms Inc.

Library

Bookworm

Program monitors circulation and overdue books. Has 800-book capacity and print-out capability. **Available for:** APII.48.D* **Price:** \$59.00 **Producer:** J.L. Hammett Company, Inc.

Catalog Card and Label Writer

Prints catalog cards and book labels in L brary of Congress or Dewey Decimal Sy tem format. Has optional lowercas adapter. Available for: APII.48.D* Price From \$169.00 Producer: K-12 Micro Media, Inc.

Library Circulation Manager

Records, prints and manages overdue boo file. Includes listing by student, homeroom class, call number and date. Available for RSIII.32.D, APII.32.D Price: \$240.00 Producer: K-12 MicroMedia, Inc.

Overdue Books Program

Information on books checked out can be recalled by student's or teacher's name. Information is quickly deleted. **Available for:** PET.32, APII.32 **Price:** \$25.00 **Producer:** Right On Programs, Computeam, Inc.

Special Education

Computer Managed Special Education

Complete special education management system: student file maintenance, I.E.P.'s, statistical reports, correspondence, updates. Requires dual disk drive. Available for: Most.64.D* Price: \$3000.00 Producer: A.U. Software.

Modularized Student Management System (MSMS)

Special education management system monitors procedural safeguards, manages banks of instructional objectives and prints customized I.E.P.'s. Modular, expandable system. Multisession training workshop available for \$485.00. Available for: APII+.48.D* Price: From \$985.00 Producer: Microcomputer Education Applications Network.

Project I.E.P.

Creates, monitors and evaluates student I.E.P.'s based on P.L. 94-142 regulations and on school district's own special education program objectives. Requires a printer and mark sense card reader. **Available for:** APII.48.D*, CBM.32.D* **Price:** \$2495.00 **Producer:** Evans Newton Inc.

SuperPlanner

Three-part software system for maintaining administrative files and student records and

for organizing instructional resources such as films, textbooks and staff. Useful for individualized instruction planning and maintaining I.E.P.'s. Available for: Most.64.D* Price: From \$300.00 Producer: Learning Tools Inc.

Mathematics

Algebra and Pre-algebra

Algebra

Three-part program: solving linear equations with one unknown, solving linear equations with two unknowns and solving second degree equations with two unknowns. Teacher's guide and grading system included. Available for: RSII/RSIII.16.C/D Grades: 7-12 Price: \$65.00 Producer: Concept Educational Software.

Algebra and More Algebra

Two sets, one of seven and one of five programs, provide review, drill and practice of fundamental algebra skills. **Available for:** PET.8.C **Grades:** 8-12 **Price:** \$19.95/ea. **Producer:** Tycom Associates.

Algebra Billiards

Tutorial and pool game drill algebraic equations. **Available for:** RSI/RSIII.16.C **Grades:** 8-12 **Price:** \$16.95 **Producer:** Curriculum Applications.

Algebra Development Program

Eight programs on one cassette develop algebra skills. Available for: RSIII.16.C Grades: 9 Price: \$9.95 Producer: Bill White.

Algebra Drill and Practice I

Nine drills provide example problems and their step-by-step solutions. Covers: algebraic signs, operations with numeric and algebraic fractions, percents, equations of lines, simplification of algebraic expressions, word problems. Available for: APII.48.D Grades: 10 + Price: \$125.00 Producer: CONDUIT.

* = Contact producer or distributor

Algebra I and II

Two drill-and-practice programs suitable for both home and classroom learning. Part one drills definitions, sets, number line operations and more. Part two introduces more advanced materials. **Available for:** APII/APII + .48.D **Grades:** 9-12 **Price:** \$39.95 **Producer:** Edu-Ware Services, Inc.

Algebra Word Problems

Helps students set up and solve word problems. Presents a step-by-step technique with multiple choice questions along the way. Offers problems in several formats for solution. **Available for:** PET.8.C **Grades:** 8-12 **Price:** \$19.95 **Producer:** Tycom Associates.

Basic Algebra

Sixteen programs cover the logic of algebra, algebraic equations and their solutions, sets, quadratics and equations in trigonometry. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C Grades: 10 + Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Entelek Computer-Based MathLab

Thirty-five programs use tutorial, simulation and other strategies to illustrate math concepts including square roots, quadratics, polynomials. Available for: APII.D Grades: 8 + Price: \$150.00 Producer: Entelek.

Equations

Three programs, Solving Equations Level I, II and III, provide students with unlimited supply of random equations to solve for a variable. Step-by-step display. Available for: AP.48.D, RSI/RSIII.32.D, PET.16.D Grades: 7-12 Price: * Producer: Educational Activities, Inc.

Equations and Inequalities

Students solve simple equations and inequalities by inserting the correct symbol of <, >, or =. Available for: PET.8.C Grades: 4-5 Price: \$9.95 Producer: Micrograms Inc.

Equations: Multiplication and Division

Drills equations with missing factors, dividends or divisors. Student selects either multiplication, division or a combination of multiplication and division equations. Available for: PET.8.C Grades: 4 + Price: \$9.95 Producer: Micrograms Inc.

INVADERS

The FIRST computer program that makes math facts fun!

- MATH INVADERS is the fun way to drill math facts for students in grades 1-5, remedial 6-8, EMR, TMR, and gifted students too!
- No computer experience necessary for either students or teachers.
- Complete with pre-tested drills in developmental and numerical sequence and exclusive drill maker for constructing individualized drills.
- Instant graphic feedback increases learning motivation.
- Presentation speed and difficulty factors can be pre-set.
- Complete package for Apple II Computers includes instruction package and diskette (including drills) for under \$50.

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2 SOFTWARE mathematics

Integers/Equations

Introduces variables, integers and elementary equations. Lets teacher keep records and modify and create lessons. Available for: APII + .48.D Grades: 6-8 Price: \$35.95 Producer: Hartley Courseware, Inc.

Introduction to Algebra

Ninety-one lessons teach algebraic concepts and techniques for solving equations. Students learn concepts in off-line text, do exercises and practice at terminal. For CCC mini- and microcomputers. Available for: * Grades: 9 + Price: * Producer: Computer Curriculum Corp.

Introductory Algebra

User can work against self or time while solving computer-generated algebraic problems. Menu provides additional information. Keeps updated record of scores. **Available for:** APII + .48.D **Grades:** 7-12 **Price:** \$29.95 **Producer:** Avant-Garde Creations.

Lessons in Algebra

Tutorial in beginning algebra for junior high students. **Available for:** APII.D **Grades:** 7-9 **Price:** \$29.95 **Producer:** George Earl.

Magic Grid

Tutors basic algebra with one-to-five unknowns. **Available for:** APII.D, RSI.16.C **Grades:** 6-9 **Price:** \$26.50 **Producer:** Ideal School Supply Co.

Number Cruncher and Function Machine

Two programs test knowledge of functions and equations. Computer changes user-selected numbers. User guesses which rule machine used. In *Function Machine*, teacher determines formulae. **Available for:** RSI/RSIII.16.D, APII.D **Grades:** 3-9 **Price:** From \$29.80 **Producer:** Bertamax, Inc., Micro School Programs.

Plot and Guess the Rule

Plot displays a high-resolution graph of any function user chooses. Can compare several

graphs on the same axis. Guess the Rule is an arcade-style algebra guessing game. Available for: Most.16.C/D Grades: 5-12 Price: \$19.95 Producer: Edu-Soft, Steketee Educational Software.

Arithmetic

Addition and Subtraction

Explains basic addition and subtraction with positive and negative numbers on three ability levels. Includes graphics, grading system and teacher's guide. Available for: RSI/RSIII.16.C/D Grades: 1-6 Price: \$25.00 Producer: Concept Educational Software.

Addition Drill and Multiplication Drill

These programs provide drill in whole number addition and multiplication using oversized numbers on the screen. Demonstrate correct method when student gets a wrong answer. Available for: RSI.16.C, RSIII.16.D Grades: 2-6 Price: \$19.95 Producer: Edu-Soft, Steketee Educational Software.

Addition Program, Subtraction Program and Multiplication Program

Self-paced lessons at many levels of difficulty display problems vertically. User can regroup problems and erase errors. *Multiplication* requires 16K and disk. **Available for:** PET.8.C **Grades:** 1-6 **Price:** From \$19.95/ea. **Producer:** Teaching Tools: Microcomputer Services.

Addition/Subtraction I and II and Multiplication I

Three basic math tutorials developed in conjunction with Scott, Foresman and Company. Speech synthesizer recommended. Program modules. Available for: TIA.16.* Grades: 1-4 Price: \$39.95/ea. Producer: Texas Instruments, Inc., Personal Computer Division.

Addition with Carrying

Program walks user through each step of a problem. Uses sound and color. **Available for:** AT.8.C/D **Grades:** 2+ **Price:** \$23.95 **Producer:** Program Design, Inc.

Apple-Based Elementary Mathematics Classroom Learning System

Six-disk arithmetic package includes tutorial, practice exercises, games and man-

agement system featuring mastery tests, recordkeeping and diagnostic/prescriptive functions. Available in English and Spanish. Available for: APII.D Grades: 4-8 Price: \$495.00 Producer: Sterling Swift Publishing Co.

Arcademic Skill Builders

Six programs use arcade-game formats to drill basic arithmetic skills at nine skill levels. Includes duplicating masters for worksheets and progress sheets, plus thematic flashcards. Also available individually. Available for: APII.48.D* Grades: K + Price: \$220.00 Producer: DLM, Inc., Developmental Learning Materials Division.

Archer

Game gives practice with addition and subtraction of two- and three-digit numbers. **Available for:** PET.8.C **Grades:** 3-5 **Price:** \$9.95 **Producer:** Micrograms Inc.

Area and Perimeter

Provides practice in calculating area and perimeter of a square or rectangle. Available for: PET.8.C Grades: 5-6 Price: \$9.95 Producer: Micrograms Inc.

Arith-Magic

Three interactive programs explore concepts and provide practice in whole number operations: *Diffy*, the case of the disappearing differences. *Tripuz*, an addition or multiplication puzzle. *Magic Squares*, an exploration of patterns. **Available for:** Most. 16. C/D **Grades:** 3 + **Price:** \$35.00 **Producer:** Quality Educational Designs.

Arithmetic Drill: Addition, Subtraction and Multiplication

Drill-and-practice program features automatically adjusted difficulty levels to match performance. Available for: APII + .32.D, PET.32.D Grades: 1-6 Price: \$55.00 Producer: Computer Courseware Services, Div. EMC Publishing.

Basic Math Competency Skill Drills

Individualized math drills in basic math skills, fractions, decimals, graphs, mean, median, mode, converting fractions and percents, percent word problems, area, circumference, etc. Available for: APII.48.C/D, RSI/RSIII.32.C/D, PET.16.C/D Grades: 7-12 Price: * Producer: Educational Activities, Inc.

Big Math Attack™

Arcade-style game uses color and graphics to teach the four basic math functions (addition, subtraction, multiplication, division). Two levels for each function. Available for: AT4.16.C, AT8.24.D Grades: 1-6 Price: From \$20.00 Producer: T.H.E.S.I.S.

Bright and Early — Math Skills

Five programs use graphics and sound to teach basic arithmetic skills. Includes a flash card review. **Available for:** RSII. 16.C **Grades:** 1-8 **Price:** \$13.95 **Producer:** The Liberty Software Co.

Building Estimation Skills

Two volumes use a hidden picture format to review rounding numbers, percent, addition, subtraction, multiplication and division. Students who miss one or more problems receive instruction. **Available for:** APII.48.D **Grades:** 4-12 **Price:** \$65.00 **Producer:** Cuisenaire Co. of America, Inc.

Bull's-eye Arithmetic

Eight programs use a tri-colored dart board, sound, visual rewards and audio prompts to drill basic arithmetic facts. **Available for:** TIA.C/D **Grades:** 2-6 **Price:** \$14.95/ea. **Producer:** Microcomputers Corp.

Cash Register

User practices math skills by running a grocery store. Includes voice tutorial explaining how to use the game. Available for: AT.16.C/D Grades: 4-9 Price: \$23.95 Producer: Program Design, Inc.

Compare Fractions

Tutorial program in comparing two fractions with denominators up to eight. One-to-four students can use the program and be scored separately. Available for: PET.8.C/D Grades: 5-8 Price: \$7.95 Producer: Teacher's PET Software.

Comparing Decimals

The student inserts the appropriate <, >, or = symbol between two decimal numerals. Available for: PET.8.C Grades: 5 + Price: \$9.95 Producer: Micrograms Inc.

Compued Multiplication A and B

Set of programs generates thousands of multiplication problems. Nine levels of difficulty. Time drill for facts. **Available for:** RSI/RSIII.16 **Grades:** 3-7 **Price:** \$20.00 **Producer:** Compued.

Compu-Math: Arithmetic Skills

Helps build skills in counting, addition, subtraction, multiplication and division. **Available for:** APII/APII+.48.D **Grades:** K-6 **Price:** \$49.95 **Producer:** Edu-Ware Services, Inc.

EQUIPMENT CODES

Example: Available for: APII.48.D

Machine codes used:	
Apple I	API
Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
Minimum Internal memory	
Minimum internal memory:	4
4K bytes	8
8K bytes	16
16K bytes	10
etc.	
Minimum peripherals needed:	
The state of the s	

Computer Activities in Math (CAIM 3-6)

Cassette player

Contact producer

Disk drive

Four grade-specific programs feature five concept-development activities each. Use game-like format. Taken from Bertamax's *Essential Math Series*. Versions for Grades 3-6. **Available for:** RSI/RSIII.16.D **Grades:** 3-6 **Price:** \$39.80/ea. **Producer:** Bertamax, Inc., Micro School Programs.

C

D

Computer Drill and Instruction: Arithmetic Games

Six one- or two-person arithmetic games. Three levels of difficulty. Each set of two games includes one disk and an instruction card. Available for: APII/APII+.48.D, AT8.32.D, IBM.64.D Grades: 2+ Price: \$60.00/set Producer: SRA, Science Research Associates, Inc.

Computer Drill and Instruction: Fact Track

Timed drill on the facts of addition, subtraction, multiplication and division. Computer reports student speed and performance. Choice of difficulty level and type of drill. Teacher's guide provided. **Available for:** APII/APII + .48.D, AT8.40.D, IBM.64.D **Grades:** 1-6 **Price:** \$100.00 **Producer:** SRA, Science Research Associates, Inc.

Computer Drill and Instruction: Mathematics

Hundreds of sequenced lessons cover arithmetic skills. Comes with or without management system. Managed version monitors learner's progress and maintains records. Teacher's guide. Available for: APII + .48.D, AT8.40.D Grades: 1-6 Price: From \$335.00 Producer: SRA, Science Research Associates, Inc.

Computer Math Games

Supplements Addison-Wesley elementary math series. Seven loose-leaf volumes, each with disk, teacher's notes and aids. Skill-practice and problem-solving exercises. Volumes sold separately or as a set. **Available for:** APII/APII + .32.D **Grades:** 1-9 **Price:** \$270.00/set **Producer:** Addison-Wesley Publishing Co., School Division.

Computer Zoo

Game of simple addition problems, subtraction problems or combinations of addition and subtraction problems. Available for: PET.8.C Grades: 1-2 Price: \$9.95 Producer: Micrograms Inc.

Con*Putation

Concentration-type game using arithmetic equations. Available for: AT4.16.C, AT8.24.D, APII+.48.D Grades: 1-6 Price: From \$20.00 Producer: T.H.E.S.I.S.

Count and Add

Four programs use hi-res color graphics and sound to help teach counting and adding. Programs match difficulty level with stu-

2 SOFTWARE mathematics

dent skill level. Available for: APII + .32.D Grades: K-3 Price: \$19.95 Producer: Edu-Soft, Steketee Educational Software.

Cubbyholes

Children build fences around set of two or three numbers in a 3 x 3 grid so that all sets equal a target sum. Children can play alone or with a friend, set a time, choose target sum and numbers of games. Joystick and sound options. Available for: APII + .48.D Grades: 1-6 Price: \$45.00 Producer: The Learning Company.

Daredevil Division

Uses graphics to reinforce correct division of problems with two-digit divisors. Available for: PET.8.C Grades: 5-6 Price: \$9.95 Producer: Micrograms Inc.

Decimal + and -

Drill in addition and subtraction of decimal numbers to hundredths. Available for: PET.8.C/D Grades: 6-8 Price: \$7.95 Producer: Teacher's PET Software.

Decimal - %

Drills conversion of decimals to percentages or vice versa. Available for: PET.8.C/D Grades: 5-8 Price: \$7.95 Producer: Teacher's PET Software.

Decimal X

Illustrates multiplication of two numbers. Student or teacher can control number of problems, number of digits and location of decimal point. Carried digits are entered in the appropriate location. For one-to-four students. Available for: PET.8.C/D Grades: 3-12 Price: \$7.95 Producer: Teacher's PET Software.

Derby

Horse race game teaches arithmetic problem solving. Available for: PET.8.C Grades: 4-6 Price: \$9.95 Producer: Micrograms Inc.

* = Contact producer or distributor

Dolphin™ Math Computation

Uses tests, drills and reviews to reinforce basic arithmetic skills. Prescriptive system. For Dolphin computer only. Teacher's and student's manuals provided. Available for: * Grades: 1-8 Price: * Producer: TSC, A Houghton Mifflin Co.

Drill II

Provides timed drill in multiplication, addition, subtraction and spelling. Auxiliary programs on a separate disk keep records of progress. Available for: APII.32.D Grades: 1-6 Price: \$29.95 Producer: Teck Associates.

Edu-Ware Decimals

Basic arithmetic operations with decimals, plus rounding. Built-in management system lets user control sequence of lessons, learning parameters and test scoring. Includes pre- and post-test. Available for: APII.48.D Grades: 3-9 Price: \$49.95 Producer: Edu-Ware Services, Inc.

Edu-Ware Fractions

Covers basic arithmetic operations with fractions. Built-in management system lets user or teacher control sequence of lessons, learning parameters and test scoring. Includes pre- and post-tests. Available for: APII.48.D Grades: 3-9 Price: \$49.95 Producer: Edu-Ware Services, Inc.

Elementary Math

Tutorial teaches elementary addition, subtraction, multiplication and division using color graphics and computer voice. Records scores for teacher access. Available for: APII/APII + .48.D Price: \$39.95 Producer: Muse Software.

Elementary Math Package I

Package of four math programs includes drill in place value, addition, subtraction and multiplication. Available for: APII.32.D, RSC.16.C Grades: 1-6 Price: \$24.95 Producer: Micro Learningware.

Elementary Math Package II

Series of seven programs covers fractions, decimals, metric lengths. Includes a number of games. Available for: RSI/RSIII.16.C/D Grades: 1-6 Price: \$24.95 Producer: Micro Learningware.

Elements of Mathematics

Uses drill and practice to teach reducin fractions and adding fractions with either common or unlike denominators. Studer router and recordkeeping options provided Available for: APII + .48.D Grades: 5-1 Price: \$90.00 Producer: Electroni Courseware Systems, Inc.

Equations: Addition and Subtraction

The student selects addition, subtraction o a combination of both and completes a many equations as possible in two minutes **Available for:** PET.8.C **Grades:** 3-5 **Price:** \$9.95 **Producer:** Micrograms Inc.

Essential Math Program, Vol. 2

Reinforces math concepts introduced by instructor. Covers fractions, decimals and percents, and pre-algebra concepts. **Available for:** RSIII.32.D **Grades:** 7-12 **Price:** \$199.00 **Producer:** Radio Shack.

Essential Mathematics

Sets of grade-specific lessons use drill and practice to teach arithmetic concepts. Teacher may adjust lesson lengths. Manuals available. Number of disks and price per grade level vary. Available for: RSI/RSIII.16 Grades: 1-8 Price: From \$56.80 Producer: Bertamax, Inc., Micro School Programs.

Expanded Notation

Students translate numerals from their expanded form. Lessons build from working with tens and ones to thousands. Introduces place value. Keeps records and lets teacher modify and create lessons. **Available for:** APII+.48.D **Grades:** 2-5 **Price:** \$29.95 **Producer:** Hartley Courseware, Inc.

Factoring Whole Numbers

Presents the concept of factoring using tutorial and practice program followed by an exploration-enrichment program. Provides guidelines for using manipulative materials. Available for: Most.16.C/D Grades: 5 + Price: \$90.00 Producer: Quality Educational Designs.

Factors and Multiples

Game for one or two players drills identification of factors and multiples. Available for: PET.16.C Grades: 5+Price: \$9.95 Producer: Micrograms Inc.

Fast Math Pacer

Drills basic arithmetic facts. Pace varies. Available for: RSI/RSIII.C/D Grades: 3 + Price: \$11.95 Producer: Cove View Press.

Find the Factors

Given the sum and product of two numbers, students guess the numbers. Three levels: 0-10, 0-100 and -50 to 50. Available for: PET.8.C/D Grades: 3 + Price: \$7.95 Producer: Teacher's PET Software.

Fraction

Sixteen programs teach numbers, decimals, factors, reducing fractions, etc. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 4-8 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Fraction and Mixed Number Recognition

Two programs use hi-res graphics, color and sound to teach students to recognize fractions and mixed numbers. Available for: APII+.32.D, AT4/AT8.16.C Grades: 1-6 Price: \$19.95 Producer: Edu-Soft, Steketee Educational Software.

Fraction X and Fraction + and -

Two programs, a multiplication program and an addition and subtraction program, drill operations on two fractions with denominators to 12. If student guesses wrong twice, program presents an interactive tutorial. Available for: PET.8.C/D Grades: 5-8 Price: \$7.95/ea. Producer: Teacher's PET Software.

Fractions

Explains fractions with the use of positive and negative numbers. Three levels of difficulty. Includes grading system and teacher's guide. Available for: RSI/RSIII.16.C/D Grades: 3-6 Price; \$25.00 Producer: Concept Educational Software.

Fractions

Provides tutorial practice program and exploration-enrichment program for each of 12 sequenced topics. Presents guidelines for activities with graphic and manipulative devices. Available for: Most.16.C/D Grades: 5 + Price: \$175.00 Producer: Quality Educational Designs.

Fractions Package

Seven programs cover topics ranging from equivalent fractions to adding mixed numbers. Available for: PET/VIC/CBM/C64.16.C/D Grades: K-12 Price: \$99.00 Producer: Micro-Ed, Inc.

Galaxy Math Facts Game

Drill and practice in whole number addition, subtraction, multiplication, division, place value, fractions, decimals and percents. Automatic lowering to an easier level if student experiences difficulty. **Available for:** APII.32.D, RSI/RSIII.C, RSIII.32.D **Grades:** 1-9 **Price:** \$34.50 **Producer:** Random House School Division.

Greased Lightning

Gives practice in multiplication facts. Available for: PET.8.C Grades: 4-5 Price: \$9.95 Producer: Micrograms Inc.

Guinness World Records Problem Areas in Math

Word and number problems based on Guinness world records. Includes four disks, teacher's manual and 24 reproducible skill sheets. Available for: APII+.48.D Grades: 4-6 Price: \$130.00 Producer: Society for Visual Education, Inc., The Singer Company.

Integers and Estimation Drill

Integers teaches the four basic arithmetic operations on positive and negative integers. In the game Estimation Drill, students must quickly estimate products of pairs of numbers. Available for: RSI.16.C, RSIII.16.D Grades: 5-10 Price: \$19.95 Producer: Edu-Soft, Steketee Educational Software.

Intermediate Long Division

Gives practice with problems consisting of a four-digit dividend and a two-digit divisor. Available for: PET.8.C Grades: 4-6 Price: \$9.95 Producer: Micrograms Inc.

Introduction to Decimals on the Computer

Reviews decimals and addition, subtraction, multiplication and division of decimals. Six difficulty levels. Especially appropriate for slow learners and learning disabled students. Available for: APII.48.C/D, RSI/RSIII.32.C/D, PET.16.C/D Grades: 2-5 Price: \$39.95 Producer: Educational Activities, Inc.

Introduction to Mathematics on the Computer

Program helps slow learners and learning disabled students increase their math abilities by reducing distractions and increasing interest. Basic skills at six difficulty levels. **Available for:** APII.48.C/D, RSI/RSIII.32.C/D, PET.16.D **Grades:** 1-4 **Price:** \$39.95 **Producer:** Educational Activities, Inc.

K-8 Math Program, Vol. 1

Drills in addition, subtraction, multiplication and division. **Available for:** RSIII.16 **Grades:** K-8 **Price:** \$199.00 **Producer:** Radio Shack.

K-8 Math with Student Management

Monitors student progress. Allows teacher to review scores. Available for: RSIII.32.D Grades: K-8 Price: \$199.00 Producer: Radio Shack.

K-8 Math Worksheet Generator

Prints worksheets and answer sheets for exercises in addition, subtraction, multiplication and division using problem sequences from K-8 Math. Available for: RSIII.32.D* Grades: K-8 Price: \$89.95 Producer: Radio Shack.

Less Than, Greater Than

Introduces, defines and drills the less-than and greater-than symbols. Available for: PET.8.C Grades: 2-3 Price: \$9.95 Producer: Micrograms Inc.

Lifeskill Mathematics Series

Six computer programs and a 36-page book of duplicating masters provide practice in basic math skills. For Grade 2-4 reading level. **Available for:** APII.32.D, RSI.32.C, RSIII.32.D **Grades:** 7-12 **Price:** \$29.95/ea. **Producer:** Media Materials, Inc.

Math Concepts

Disk of 22 lessons provides drill and practice with a variety of elementary math concepts. Features two levels of difficulty and three pre- and post-tests that let teacher test and place students. **Available for:** APII + .48.D **Grades:** 2-6 **Price:** \$39.95 **Producer:** Hartley Courseware, Inc.

2 SOFTWARE mathematics

Math Drill and Practice Series

Three math programs: Math Skill Games, Math Word Games, Math Regrouping Games. Build computational accuracy and speed. Available for: APII+.32.D, RSIII.32.D, PET.8.C Grades: 4-6 Price: From \$38.25 Producer: McGraw-Hill Book Co., Webster/McGraw-Hill Div.

Math Facts Games I

Four one-person arithmetic games. User plays with computer or opponent. Uses 100 facts in four basic skills. Uses competition for motivation. Available for: Most Grades: 3-9 Price: \$29.80 Producer: Bertamax, Inc., Micro School Programs.

Math Facts Games II

Four two-person games. User plays with computer or opponent. Uses 100 facts in four basic skills. Uses competition for motivation. Available for: RSI/RSIII.16.D, AT8 Grades: 3-9 Price: \$29.80 Producer: Bertamax, Inc., Micro School Programs.

Math Facts — Levels I, 2 and 3

Three self-paced instructional programs cover elementary arithmetic. **Available for:** AT4.16.C, AT8.24.C **Grades:** K-2 **Price:** \$20.00/ea. **Producer:** T.H.E.S.I.S.

Math Ideas with Base Ten Blocks

Graphic display of base ten blocks reinforces basic arithmetic skills with particular attention to the transition to paper and pencil work. Available for: APII.48.D Grades: 2-8 Price: \$45.00 Producer: Cuisenaire Co. of America, Inc.

Math Invaders™

Math facts practice package stresses speed and accuracy. Includes 40 graded drills, teacher's manual and student reference card. **Available for:** APII.D **Grades:** K-l2 **Price:** \$47.50 **Producer:** Winners Circle.

Math Marauders!

Arcade-style game teaches basic addition, subtraction or multiplication facts. Avail-

able for: PET.8.C Grades: 4-6 Price: \$9.95 Producer: Micrograms Inc.

Math Reading

Sixteen tutorials on arithmetic word problems. Disk covers percent, interest, commissions, business arithmetic, discounts, etc. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 4-6 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Math Series

Seven separate programs cover topics such as fractions, decimals, rounding off, signed numbers and how to read a graduated cylinder. **Available for:** PET/CBM.C **Grades:** 3-12 **Price:** \$15.00/ea. **Producer:** Cow Bay Computing.

Math Series

Series of 11 math tutorials includes telling time, addition, subtraction, multiplication, division, fractions, sets, money, solving word problems and measurements. Provides examples and corrects answers.

Available for: APII/APII + .32.D, PET.8.C Grades: 1-6 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Math Skills

Contains two programs. *Pirate* requires student to use deductive logic and math facts to find a treasure in a 10 x 10 matrix. *Rounding* teaches rounding of numbers. **Available for:** APII.32.D, RSI/RSIII.32.D **Grades:** 3-7 **Price:** \$24.95 **Producer:** Diversified Educational Enterprises, Inc.

Math Skills I and II

Two programs provide math drill and practice in skill areas ranging from addition and subtraction to ratios, graphing and percents. Both include teacher's guides. **Available for:** APII + .D **Grades:** 4-6 **Price:** \$74.00/ ea. **Producer:** Encyclopaedia Britannica Educational Corp.

Math Strands I

Tailors drill-and-practice lessons to student's achievement level in 14 skill areas. Spanish version available. For CCC miniand microcomputers. Available for: * Grades: 1-9 Price: * Producer: Computer Curriculum Corp.

Math with Microman

Gives practice in working two-digit addition problems with carrying and two-digit subtraction problems with borrowing Available for: PET.16.C Grades: 3-4 Price: \$9.95 Producer: Micrograms Inc.

Mathematics Action Games

Three modules use animation, sound and games to augment instruction and provide practice in basic math skills. Four games and four math topics per module. **Available for:** TIA.* **Grades:** 1-8 **Price:** \$79.95/ea. **Producer:** Scott, Foresman and Co., Electronic Publishing Div.

Mathematics Courseware Series

Tutorial and practice activities cover elementary math concepts. Automatically selects appropriate activities when practice results indicate need. Uses animation, music and speech. Six packages. Available for: TIA* Grades: K-8 Price: From \$44.95/ea. Producer: Scott, Foresman and Co., Electronic Publishing Div.

Mathematics Program

Augments basal arithmetic programs with sound, animation and full color. Includes teacher's guide. Available for: Most.48.D Grades: K-12 Price: * Producer: American Educational Computer, Inc.

Mathematics Series

Six mathematics programs provide drill and practice in addition, subtraction, multiplication of up to three-digit numbers and fractions, and long division. Immediate feedback on all errors. Include user's manual. Available for: Most Grades: 1-3 Price: \$24.95/ea. Producer: Microcomputer Workshops Corp.

Mathfaks

Drills basic arithmetic operations. With Votrax Type-'N-Talk™ added, provides voice feedback. With printer, provides study problems for student and quiz problems for teacher's later use. Available for: AT4/AT8.24.C/D* Grades: 1-6 Price: \$24.95 Producer: Computer's Voice.

Mathpack — I

Includes three drill-and-practice programs: Mathgrid, Speed Facts and Multiplication and Division Fun. Drills accuracy and speed in basic math facts. Provides audio feedback. Available for: APII + .16.D Grades: 1-5 Price: \$29.95 Producer: Ideatech Co.

Mathware Basic Math System S

Drill-and-practice program includes five curriculum disks covering basic arithmetic skills, fractions, decimals, and ratios and percents. Also test, management and data storage disks. Computer controls level of difficulty. Available for: APII.48.D Grades: 2-9 Price: \$350.00 Producer: Mathware.

Maxit

Addition and subtraction game. Requires joysticks. Available for: AT.* Grades: K + Price: \$19.95 Producer: Jadee Enterprises.

Micro-Math

Uses step-by-step procedure to demonstrate and drill basic math skills. Over 280 levels with automatic level adjustment. Recordkeeping capabilities. Available for: APII/ APII + .32.D, RSI/RSIII.32.D Grades: 1-8 Price: \$345.95 Producer: Educational Teaching Aids.

EQUIPMENT CODES

etc.

Cassette player

Contact producer

Disk drive

Available for: APII.48.D

Machine codes used:	
Apple I	API
Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
Minimum internal memory:	
4K bytes	4
8K bytes	8
16K bytes	16

Minimum peripherals needed:

D

Micro-Math

Uses graphics and sound to drill addition. subtraction, multiplication and division. Continuous report card identifies wrong answers for future study. Built-in management system. Available for: RSI/ RSIII.16.C Grades: 1-6 Price: \$16.95 Producer: Micro-80 Inc.

Microcomputers Corporation Arithmetic

Four drill-and-practice programs, one on each of the four basic arithmetic operations. Available for: TIA.C/D Grades: 2-8 Price: \$14.95/ea. Producer: Microcomputers Corp.

MicroTutorII Tutorial Arithmetic

Four-disk package can be used to teach arithmetic in an individualized manner with pre- and post-tests. Includes teacher's manual. Available for: APII + .48.D Grades: 1 + Price: \$200.00 Producer: JMScandura Associates, Instructional Micro Systems, Inc.

Milton Bradley Math Skills

Three programs of interactive tutorials, practice and review in decimals, division and mixed numbers. Include 28 reproducible worksheets, tests and teacher's guide. Available for: APII.48.D Grades: 6-8 Price: \$44.95/ea. Producer: Milton Bradley, Educational Div.

Missing Math Facts

Contains addition, subtraction, multiplication and division examples on four levels of difficulty. Available for: APII.48.C/D, RSI/RSIII.32.C/D, PET.16.D Grades: 3-8 Price: \$39.95 Producer: Educational Activities, Inc.

Money, Money

Uses graphics to familiarize child with determining amounts of money shown, counting change and working with more/ less problems. Teacher can change or create lessons. Available for: APII + .48.D Grades: 2-5 Price: \$39.95 Producer: Hartley Courseware, Inc.

Multiplication and Division

Explains multiplication and division with positive and negative numbers. Three levels of difficulty. Includes some graphics, grading system and teacher's guide. Available for: RSI/RSIII.16.C/D Grades: 3-6 Price: \$25.00 Producer: Concept Educational Software.

Multiplov

Arcade-type space game drills basic arithmetic skills. Tracks student progress and displays missed answers at three levels of difficulty. Optional sound. Instruction booklet included. Available for: APII.48.D Grades: 1-8 Price: \$19.95 Producer: Reston Publishing Co.

Number Arithmetic

Tutorial uses color graphics and sound to teach numbers, digits, fractions and other arithmetic functions. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 1-6 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Number Magic

Uses color and sound for drill and practice in basic mathematics. Program module. Available for: TIA.16.* Grades: 1+ Price: \$19.95 Producer: Texas Instruments, Inc., Personal Computer Div.

Number Words — Level 1

Lessons at five levels of difficulty present number words on the screen. The student types in the corresponding numeral. Teacher's guide included. Available for: APII + .48.D Grades: K-2 Price: \$26.95 Producer: Hartley Courseware, Inc.

Number Words — Level 2

Ten lessons cover number words from 100. Lessons are graduated in difficulty. Teacher can modify and create lessons. Available for: APII + .48.D Grades: 2-6 Price: \$29.95 **Producer:** Hartley Courseware,

Path Master

Uses game format to drill arithmetic problem-solving skills. Available for: PET.8.C Grades: 4+ Price: \$9.95 Producer: Micrograms Inc.

Percentages

Three programs, Introduction to Percent. Fractions as Percent and Finding a Percent' of a Number, provide instruction and reinforcement. Available for: APII.48.C/D. RSI/RSIII.32.C/D, PET.16.C/D Grades: 7-12 Price: * Producer: Educational Activities, Inc.

Percents and Decimals

Sixteen-program unit teaches how to change fractions into decimals, rounding

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off decimals, converting dollars to cents. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 4-6 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

PET Professor

Seventy-seven programs provide step-bystep instruction in arithmetic. Management system available. Spanish version in process. Available for: PET.C, CBM.D Grades: 2 + Price: \$499.00 Producer: Cow Bay Computing.

Prescriptive Math Drill

Teacher sets difficulty level and percentage of accuracy needed to advance for each student. Student must answer 20 problems at the prescribed accuracy level before moving to the next level. **Available for:** APII + .48.D **Grades:** 1-4 **Price:** \$79.95 **Producer:** Hartley Courseware, Inc.

Quotient Quiz

Students determine which number divided by four, by five and by seven results in a given remainder. Reinforces division, remainders and the concept of multiples. **Available for:** PET.8.C/D **Grades:** 4+ **Price:** \$7.95 **Producer:** Teacher's PET Software.

Read and Solve Math Problems

Tutorial and drill program teaches the important elements of word problems and the conversion of word to number problems. Includes reproducible activity masters and pre- and post-tests. **Available for:** APII.48.D, RSI/RSIII.32.D, PET.16.D **Grades:** 4-12 **Price:** \$85.00 **Producer:** Educational Activities. Inc.

Six Second Club

Drills basic math facts. Five program variations available for different grade levels. **Available for:** PET.8.C **Grades:** I-8 **Price:** \$9.95 **Producer:** Micrograms Inc.

Soccer Math

Math teaching program uses graphically displayed soccer players to test correct an-

swer. Students compete at their own ability levels. Automatic adjustment of skill level. Includes password-protected teacher management file. Available for: APII.48.D Grades: 1-6 Price: \$24.95 Producer: Compu-Tations Inc.

Solving Word Problems

Two programs teach word problems. Part I is third-to-fifth-grade reading level. Part II is sixth to seventh grade. Also available individually. Available for: APII.D, RSI/RSIII.C Grades: 3-7 Price: \$55.00 Producer: Aquarius Publishers, Inc.

Spark-80 Mathematics Courseware

Eleven multidisk packages provide tutorial, drill, game and assessment programs with animated graphics for math readiness and arithmetic skills. Each package includes manual, management system and worksheets. Available for: RSI/RSIII.32.D Grades: K-8 Price: From \$238.00/ea. Producer: Precision People, Inc.



Twelve-disk MATH SEQUENCES package from Milliken Publishing Co. provides skill development in most prealgebra mathematics skills.

Speed Drill and Number Line

Two-program disk. *Speed Drill* tests number facts including positive and negative numbers. *Number Line* uses graphics and sound to demonstrate and drill addition and subtraction of signed numbers **Available** for: APII+.16.D **Grades:** 3-11 **Price:** \$19.95 **Producer:** Edu-Soft, Steketee Educational Software.

The Store That Teaches

Turns computer into a cash register for children to play store. In automatic mode, the computer provides answers. In teach mode, users do the calculations. Computer analyzes errors and teaches specific remedial skills. Available for: APII/APII + .48.D Grades: 1-6 Price: From \$29.95 Producer: Metacomet Software.

Teacher's Aide

Exercises to test addition, subtraction, multiplication and division. Breaks calculations down into individual steps. Available for: Most.C/D Grades: 3-5 Price: \$17.95 Producer: Dynacomp, Inc.

Tic-Tac-Toe (Addition)

Five two-player games use graphics, color and random selection to review addition. **Available for:** TIA.C/D **Grades:** 1-3 **Price:** \$14.95 **Producer:** Microcomputers Corp.

Geometry and Trigonometry

Archimedes' Apprentice

Covers parallelepipeds (cubes and rectangular solids), regular parallelepipeds, prisms, pyramids, cylinders, cones and spheres. The student sees on-screen diagrams and formulae and is quizzed. **Available for:** RSI.16.C **Grades:** 9-12 **Price:** \$9.95 **Producer:** Instant Software[™], Inc., Wayne Green, Inc.

Discovery Learning in Trigonometry

Uses discovery learning techniques to introduce students to functions, amplitude, period, phase shift, polar coordinates. Uses graphs extensively. Available for: APII.48.D Grades: 10+ Price: \$75.00 Producer: CONDUIT.

Euclid Geometry Tutor

Reinforces basic geometry concepts. Allows students to develop proofs using nine basic postulates of Euclidean geometry. Available for: RSIII.16 Grades: 9-12 Price: \$39.95 Producer: Radio Shack.

Geometry

Sixteen tutorials teach formulae for the area of triangles, how to use the Pythagorean Theorem and how to find the area of rectangles and squares. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 6-12 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Mathematics — Volume 3 (Geometry)

Five programs provide graphic tutorial ac-

tivities in geometric shapes and calculation of perimeters and areas. Available for: APII.32.D Grades: 10+ Price: \$35.40 Producer: Minnesota Educational Computing Consortium (MECC).

Plane Analytic Geometry

Generates problems in geometry for students to solve. Emphasizes straight lines and conic sections. Available for: RSIII.16 Grades: 9-12 Price: \$39.95 Producer: Radio Shack.

Programs for Trigonometry

Thirteen programs provide demonstration and drill and practice in radian measure, trigonometric functions, identities and graphing. For Compucolor II and Intecolor computers. Available for: * 16.D Grades: 12 + Price: \$49.95 Producer: Metier.

Senior High Math I Diskette

Thirteen programs cover quadratic equations, trigonometry, simultaneous equations, geometry and word problems. Individual programs available on cassette. **Available for:** APII.16.D, PET/CBM.8.D, RSI/RSIII.16.D **Grades:** 10-12 **Price:** \$180.00 **Producer:** Microphys Programs.

Surveyor's Apprentice

Teaches the formulae for finding the area of plane figures. Uses graphics to display shapes. Available for: RSI/RSIII.16.C Grades: 9+ Price: \$9.95 Producer: Instant Software™, Inc., Wayne Green, Inc.

Trigonometric Functions of an Acute Angle

Drills student on problems derived from the three basic trigonometric equations. Uses graphics and randomly generated problems. Includes grading system and teacher's guide. Available for: RSI/RSIII.16.C/D Grades: 9-12 Price: \$30.00 Producer: Concept Educational Software.

Graphing

Advanced Graphics

Problem-solving exercises in algebra and trigonometry. **Available for:** RSIII.16 **Grades:** 8-12 **Price:** \$29.95 **Producer:** Radio Shack.

Automatic Graphing of Functions

Graphs lines, curves and trigonometric functions for user-determined equations. User can control Y axis for unique graphs. Available for: RSI/RSIII.16.C Grades: 6-12 Price: \$19.95 Producer: Modtec.

Cactusplot

Versatile function plotter in color. Plots x-y coordinate graphs. Available for: APII + .48.D Grades: 10 + Price: \$60.00 Producer: Cactus Software.

Computer Graphing Experiments

Supplements Addison-Wesley high school math series. Students create and compare graphs of mathematical functions. Three loose-leaf volumes with disk, teacher's notes and aids. Available as a set or as individual volumes. **Available for:** APII/APII+.32.D **Grades:** 10-12 **Price:** \$120.00/set **Producer:** Addison-Wesley Publishing Co., School Division.

Coordinate

Mathematics program provides practice in graphing points on a Cartesian coordinate system. Uses screen as worksheet and gives immediate feedback. Includes user's manual. Available for: PET.8.C Grades: 7-10 Price: \$20.00 Producer: Microcomputer Workshops Corp.

Function Graphs and Transformations/Vector Analysis

Uses hi-res graphics to provide a visual, intuitive and experimental approach to algebra, trigonometry and analytic geometry. **Available for:** APII/APII + .D **Grades:** 9-12 **Price:** \$34.95 **Producer:** Powersoft Inc.

Graph It TM

Two cassettes create bar graphs, pie charts and multidimensional plots and polar plots. Requires joystick and ATARI 410[™] Program Recorder. Available for: AT4/AT8.16.C* Grades: 9-12 Price: \$19.95 Producer: ATARI, Inc., Home Computer Div.

Graphing

Two programs, Introduction to Graphing on the Coordinate Plane and Plotting Points on the Coordinate Plane, review basic terms and give instruction on writing ordered pairs for a point on a plane. Available for: APII.48.C/D, RSI/RSIII.32.C/D, PET.16.D Grades: 7-12 Price: * Producer: Educational Activities, Inc.

Graphing Can Be Fun!

Two programs that teach about graphs: *Pie and Line Graphs* and *Bar and Picture Graphs*. Also available individually. **Available for:** APII.C/D, RSI/RSIII.C **Grades:** 4-8 **Price:** \$55.00 **Producer:** Aquarius Publishers, Inc.

GraphMagic

Produces line graphs, bar graphs, pie charts and point graphs. Can incorporate text and overlay graphics. Features: full color, automatic or manual scaling, printer support. **Available for:** APII/APII + .48.D **Grades:** 6 + **Price:** Under \$100.00 **Producer:** International Software Marketing, Ltd.

HIGRAPH-1™

Produces line, pie and bar charts. For use with Bausch & Lomb HIPLOT® graphics tablet. Available for: Most.D.* Grades: 6-12 Price: \$25.00 Producer: Bausch & Lomb, Instruments and Systems Div.

Ultra Function Plot

User graphs mathematic functions by entering formula and type of graph desired. Options include: sine, cosine, bell curves, line graphs, quadratics, polynomials, etc. **Available for:** APII.48.D **Grades:** 10+**Price:** \$59.95 **Producer:** Avant-Garde Creations.

Problem Solving

Bumble Plot

Five graphing and problem solving games. Players plot both negative and positive numbers as they set up roadblocks to trap a robber, read a sonar map and draw graphics on a grid. **Available for:** APII + .48.D **Grades:** 3-8 **Price:** \$60.00 **Producer:** The Learning Company.

Creative Play: Problem Solving Activities with the Computer

Disk has 25 programs that emphasize logical reasoning, creative thinking, spatial visualization and pattern identification skills. Activities encourage children to develop social skills. Available for: PET.D Grades: 3-6 Price: \$48.00 Producer: Math and Computer Education Project.

The DIG (Diagnostic Instructional Gaming) MATH Program

Twelve-disk program of math strategy

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games. Computer diagnoses player's skill level and challenges player to a match that teaches a specific skill. Over 1000 matches. Available for: APII.48.D Grades: 4-12 Price: \$400.00 Producer: WFF'N PROOF Learning Games Associates.

Dolphin™ Math Problem Solving

Uses over 2000 real-world problems to teach problem-solving skills in addition, subtraction, multiplication, division of whole numbers, fractions, decimals. Based on Polya's four-step problem-solving model. Available for: * Grades: 3-8 Price: * Producer: TSC, A Houghton Mifflin Co.

Elementary Math

Package includes four programs — Bagels, Estimate, Super Drill, Taxman — that cover reasoning, logic, estimation, factoring and prime numbers. Available for: APII.32.D Grades: 4-6 Price: * Producer: TIES: Total Information for Ed. Systems.

Graphical Analysis of Experimental Data

Secondary math and physics problemsolving exercises. **Grades:** 9-12 **Price:** \$39.95 **Producer:** Radio Shack.

Guess the Number and Reverse

Two educational games using sound and color graphics. *Guess the Number* challenges estimating skills. *Reverse* develops problem-solving strategies. **Available for:** AT4.16.C, AT8.16.D **Grades:** 3-9 **Price:** \$19.95 **Producer:** Edu-Soft, Steketee Educational Software.

Linear Search/Grid Search Games

Two sets of games develop problem-solving strategies. Linear search games involve searching for a member of an ordered set. Grid search games involve searching a grid. **Available for:** APII.16.C/D, RSI.16.C/D, PET.8.C **Grades:** 5 + **Price:** \$23.95/ea. **Producer:** Creative Publications.

Math Strategy

Self-paced instruction helps children make lasting mental pictures of math tables for

easy recall. Sound and color graphics. Can be easily programmed to include personal math lessons. **Available for:** APII/ APII + .48.D* **Grades:** 2-8 **Price:** \$45.00 **Producer:** Special Delivery Software, Apple Computer, Inc.

Mathematics Problem-Solving Edu-Disks

Teaches problem-solving strategies. A master disk holds loading programs and three program disks cover one computational level each. Includes workbooks and instructional guide. Available for: APII.48.D, RSIII.48.D Grades: 5-8 Price: \$174.96 Producer: Reader's Digest Services. Inc., Educational Div.

Problem Solving

Teaches problem solving with word problems. Uses specific comments, hints and error messages to reinforce techniques. For CCC mini- and microcomputers. Available for: * Grades: 3-6 Price: * Producer: Computer Curriculum Corp.

Problem Solving in Everyday Math

Four-disk program provides tutorial with simulations to teach step-by-step approach to solving common mathematical problems to both special education and regular students. Teacher's manual includes tests and worksheets. Available for: APII.48.D Grades: 5-12 Price: From \$165.00 Producer: Interpretive Education, Inc.

Problem Solving in Math

Tutorial programs for teaching problemsolving skills. Include mystery stories, vocabulary drill, problems without numbers and activities. Textbook and teacher's manual available. Separate package for each grade. **Available for:** APII.48.D, RSI/ RSIII.16.D **Grades:** 3-6 **Price:** \$115.00/ ea. **Producer:** Bertamax, Inc., Micro School Programs.

Syllogistic Logic

Three drill-and-practice programs cover: identifying the four types of categorical propositions, Venn diagramming and constructing categorical syllogisms. Available for: RSI/RSIII.32.D Grades: 11 + Price: \$50.00 Producer: CONDUIT.

Verbal Problem Solving

Four-disk interactive tutorial on methods for solving math word problems. Available

for: APII + .D **Grades:** 8-12 **Price:** \$266.00 **Producer:** Encyclopaedia Britannica Educational Corp.

Other Mathematics

Analytics

Covers Fourier analysis, chi square, mean and standard deviation, and other useful statistics. Includes student manual. **Available for:** APII/APII + .48.D **Grades:** 9 + **Price:** \$60.00 **Producer:** Science Software Systems, Inc.

Bumble Games

Six number plotting games. The character Bumble gives clues as children guess secret numbers on a number line or locations on a map. In *Bumble Dot* player makes dot-to-dot pictures. Sound option. **Available for:** APII + .48.D **Grades:** K-4 **Price:** \$60.00 **Producer:** The Learning Company.

Calculus I Diskette

Twelve programs cover maxima/minima problems, relative rates, integration and differentiation. Individual programs available on cassette. **Available for:** APII.16.D, PET/CBM.8.D, RSI/RSIII.16.D **Grades:** 11 + **Price:** \$180.00 **Producer:** Microphys Programs.

Essential Math Program, Vol. 1

Self-paced drill-and-practice program reinforces math concepts. Available for: RSIII.16 Grades: 7-12 Price: \$199.00 Producer: Radio Shack.

Geoboard Geometry and Measurement

Graphic display of a 25-pin geoboard reinforces reading a ruler, measuring line segments, constructing parallel and perpendicular lines, and finding the area and perimeter of polygons. Available for: APII.48.D Grades: 4-8 Price: \$45.00 Producer: Cuisenaire Co. of America, Inc.

Investigations in Integral Calculus

Allows students to graph and compute areas of functions. Available for: RSIII.16 Grades: 9+ Price: \$39.95 Producer: Radio Shack.

Junior High Math Diskette

Fifteen programs cover percent, proportion and word problems, decimals, fractions,

bar graph analysis, multiplication, division, and mode, median and mean. Available separately on cassette. Available for: APII.16.D, PET/CBM.8.D, RSI/RSIII.16.D Grades: 7-9 Price: \$180.00 Producer: Microphys Programs.

Linear Measure — Customary

Tutorial uses graphics to review the relationships between inches, feet, yards and miles. Tests and progress summaries included. Available for: PET.8.C Grades: 3-8 Price: \$12.00 Producer: K8 Software.

Magic Flag

Illustrates concepts of entropy and randomness. For use in high school math and science classes. **Available for:** APII/APII+.48.D **Grades:** 10+ **Price:** \$60.00 **Producer:** Science Software Systems, Inc.

Math Enrichment Modules

Supplementary junior high math course in sets, geometry, statistics, probability, logic, functions and graphing. For CCC miniand microcomputers. Available for: * Grades: 7-8 Price: * Producer: Computer Curriculum Corp.

Math I

Computer randomly generates drills from bank of 3000 questions keyed to instructional objectives. Teacher selects grade level, objective and number of items. Student workbook and user's manual provided. **Available for:** APII/APII + .48.D **Grades:** 3-8 **Price:** \$250.00 **Producer:** The Psychological Corp.

Math Lab I

Two math units —*Time-Rate-Distance* and *Graphs*. Both drill basic skills and illustrate concepts through simulation. Track student performance. **Available for:** APII + .48.D **Grades:** 6-7 **Price:** \$65.00/ea. **Producer:** EduTech.

Math Sequences

Twelve-disk package provides skill development in most pre-algebra mathematics skills. Work may be individualized by curriculum objectives and performance standards. Includes teacher's guide, management materials, forms, **Available for:** APII + .48.D, AT8.32.D, T1.32.D **Grades:** 1-8 **Price:** From \$450.00 **Producer:** Milliken Publishing Co., Computer Products Div.

Math Skills Pak

Two menu-driven test programs, *Math I* and *Math II*, drill algebra, geometry and trigonometry. *Math II* features questions with plots, graphs and charts. Both drill for math boards. **Available for:** APII.D **Grades:** 9 + **Price:** \$50.00/ea. **Producer:** SEI, Sliwa Enterprises Inc.

MatheMagic

Performs mathematic calculations on microcomputers. Requires no programming. Uses normal math format for formulae that are visually displayed as they are evaluated and solved. Available for: Most Grades: 6+ Price: Under \$100.00 Producer: International Software Marketing, Ltd.

Mathematics Applied to Career Highlights (MATCH) Software

Five disks supply unlimited number of computational and word problem drill and test items in basic math skills. Correlates with McGraw-Hill's *MATCH Series*. Includes management system. **Available for:** APII/APII + .48.D **Grades:** 8 + **Price:** * **Producer:** McGraw-Hill Book Company, Gregg/McGraw-Hill.

Mathematics Strands II

Individualized drill in positive integers, fractions, decimals, percent, negative numbers, equations, inequalities, number theory. For CCC mini- and microcomputer.

Available for: * Grades: 7-8 Price: * Producer: Computer Curriculum Corp.

Mathematics Worksheets

Generates individualized printed worksheets for use with CCC's *Mathematics Strands* curriculum. Drills either mixed or single skills. Levels selected according to course history or by teacher. For CCC minicomputer. **Available for:** * **Grades:** 1-9 **Price:** * **Producer:** Computer Curriculum Corp.

Metric Drill

Drill-and-practice program includes lessons in the areas of length, mass and capacity. Includes pre- and post-tests at three levels of difficulty. Teacher can modify and create lessons. Teacher's guide included. **Available for:** APII + .48.D **Grades:** 4-8 **Price:** 49.95 **Producer:** Hartley Courseware, Inc.

Metric/English Conversion

Drill-and-practice program with problems in conversions from English to metric and

metric to English. Includes a grading system and teacher's manual. Available for: RSI/RSIII.16.C/D Grades: 7-12 Price: \$30.00 Producer: Concept Educational Software.

Metric System Tutor

Teaches the use of metric units. Placement test directs user to one of four lessons, a final test follows. Includes teacher's guide. **Available for:** APII/APII + .48.D **Grades:** 8 + **Price:** \$75.00 **Producer:** Science Software Systems, Inc.

Secondary Package and Super Math Package

Two multiprogram packages use graphics to teach selected mathematical concepts. Include user's guides. **Available for:** APII.48.D **Grades:** 7 + **Price:** From \$175.00 **Producer:** Math Software.

Senior High Math II Diskette

Eleven programs cover word problems, arithmetic and geometric progressions, types of variation, linear equations, formula evaluation, coordinate geometry, exponents, logarithms. Available individually

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on cassette. **Available for:** APII.16.D, PET/CBM.8.D, RSI/RSIII.16.D **Grades:** 10-12 **Price:** \$180.00 **Producer:** Microphys Programs.

Speed Drill, Guess the Number and Arithmetic Drill

Speed Drill provides timed drill on number facts. Includes number option for beginning algebra use. Guess the Number is an estimation game. Available for: RSI.16.C, RSIII.16.D Grades: 3-9 Price: \$19.95 Producer: Edu-Soft, Steketee Educational Software.

Statistics

Sixteen programs on descriptive and inferential statistics explore probability and normal distribution curves. Also cover statistical testing. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 7-12 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Statistics I

Determines mean, mode, median, standard deviation, variance, skewness, kurtosis and root mean square. Requires ATARI 410™ Program Recorder or ATARI 810™ Disk Drive with optional printer. Available for: AT4/AT8.16.C/D* Grades: 9-12 Price: \$19.95 Producer: ATARI, Inc., Home Computer Div.



MICROCOSM I, includes programs for recreation, education, and personal use from Basics and Beyond, Inc. for grades 3-12.

Statistics Pac

Includes programs for probability, distribution, curve fitting and general statistics. Graphs curves, distribution arrays and histograms. Available for: APII.32.D Grades: 10-12 Price: \$99.95 Producer: Charles Mann and Associates, Microsoftware Div.

Vector Addition

Problem-solving exercises in secondary math and physics. Available for: RSIII.16 Grades: 9-12 Price: \$29.95 Producer: Radio Shack.

Science

Chemistry

Acid/Base Titration

Monitors and graphs pH vs. volume of substance. Can save, print out or regraph a plot. Requires Cambridge Development Lab's Analog Peripheral and pH Input Module. Available for: APII + .D* Grades: 10-12 Price: \$95.00 Producer: Cambridge Development Laboratory.

Atomic Structure

Nine drill-and-practice programs cover topics such as octet rule, VSEPR method and various calculations based on an atom's position in the Periodic Table. Also includes a simulation of the oil drop experiment. Available for: Most Grades: 10 + Price: \$150.00 Producer: Programs for Learning, Inc.

Chem Lab Simulations

Four interactive packages cover titrations ideal gas law, calorimetry an thermodynamics. Available for APII.48.D Grades: 10-12 Price: \$100.00 ea. Producer: High Technology Softwar Products, Inc.

Chem Lab Simulations I and II

Simulate several common lab applications and can be used to demonstrate actual lab procedure and to assist students in gaining a better understanding of the typical calculations needed to process the lab data obtained. Available for: APII.48.D, AT8.48.D Grades: 10 + Price: \$75.00/ea. Producer: CONDUIT.

Chemical Equilibrium

Ten drill and simulation programs. Simulations of ammonia synthesis and hydrogen-iodine-H1 equilibrium system. Available for: Most Grades: 10+ Price: \$150.00 Producer: Programs for Learning, Inc.

Chemistry — Equilibrium and Acid/Base

Drill-and-practice program emphasizes mole-to-gram conversions and balancing equations. Includes teacher's guide. Available for: APII + .D Grades: 10-12 Price: \$74.00 Producer: Encyclopaedia Britannica Educational Corp.

Chemistry I Diskette

Thirteen programs: Calorimetry, Specific and General Gas Laws, Faraday's Law, Formulas of Compounds Drill and others. Individual programs available on cassette. Available for: APII.16.D, PET/CBM.8.D, RSI/RSIII.16.D Grades: 10 + Price: \$180.00 Producer: Microphys Programs.

Chemistry II Diskette

Thirteen programs cover stoichiometry, pH concept, chemistry analysis, molarity, etc. Individual programs available on cassette. **Available for:** APII.16.D, PET/CBM.8.D, RSI/RSIII.16.D **Grades:** 10 + **Price:** \$180.00 **Producer:** Microphys Programs.

Chemistry I Series

Seven interactive programs cover basic chemistry concepts with drill-and-practice problems and simulations. Includes teacher's manual. Available for: APII/APII+.16.D Grades: 10+ Price: \$75.00 Producer: Science Software Systems, Inc.

Chemistry Simulations

Allows students to control and see results of various experiments. Experiments include kinetic theory, Charles' law, Boyle's law, titration, conductivity and solubility. Student experiment books provided. Available for: RSC.16.C Grades: 9-12 Price: \$199.00 Producer: Radio Shack.

Chemistry Simulations I and II

Feature high-resolution animated lab simulations. The simulations randomly generate initial values. Available as set or separately. **Available for:** APII.D **Grades:** 9-12 **Price:** \$55.00/set **Producer:** Aquarius Publishers, Inc.

Chemistry Software

Series of six multiprogram chemistry packages: acid/base chemistry, atomic structure, fundamental skills for general chemistry, chemical equilibrium, organic nomenclature and chemistry with a computer. Include simulations and drills. Available for: Most Grades: 10 + Price: \$150.00/ea. Producer: Programs for Learning, Inc.

Chemistry — Stoichiometry

Program emphasizes acid reactions with practice titrations and problems. Available for: APII+.D Grades: 11-12 Price: \$74.00 Producer: Encyclopaedia Britannica Educational Corp.

Chemistry: The Gas Laws

Uses drill to teach gas law equations. Provides a large number of problems. Grading system and teacher's guide included. Available for: RSI/RSIII.16.C/D Grades: 10-12 Price: \$30.00 Producer: Concept Educational Software.

Chemistry with a Computer

Package includes 11 programs and the book *Chemistry with a Computer*. Programs include simulations of *ChemStudy* experiments. **Available for:** Most **Grades:** 10+ **Price:** \$150.00 **Producer:** Programs for Learning, Inc.

Computer Chemistry

Fifteen programs use graphics in review of major high school chemistry topics. Student progress is recorded for the teacher to assess. Available for: APII.D, RSI/RSIII.D Grades: 10 + Price: \$250.00 Producer: J & S Software.

Cooling and Warming Curves

Computer automatically takes and graphs temperature data for a variety of substances. Requires Cambridge Development Lab's Analog Peripheral and Temperature Input Module. Available for: APII + .D* Grades: 10-12 Price: \$60.00 Producer: Cambridge Development Laboratory.

Freezing Point Depressions

Includes the temperature curves of various solutions. Requires Cambridge Development Lab's Analog Peripheral and Temperature Input Module. Available for: APII + .D* Grades: 10-12 Price: \$60.00 Producer: Cambridge Development Laboratory.

Fundamental Skills for General Chemistry

Twelve programs drill balancing equations, metric-to-English conversions, density/mass/volume problems, exponential notation, symbols and charges for common ions, and other topics. Available for: Most Grades: 10 + Price: \$150.00 Producer: Programs for Learning, Inc.

HABER — Ammonia Synthesis

Simulation lets students study the Haber process and how the various conditions influence the course of the reaction. Available for: Most.D Grades: 11+ Price: \$35.00 Producer: CONDUIT.

Introduction to Chemistry

Interactive program provides definitions, illustrations of atomic structure, periodic table. Should not be considered a full course in chemistry. **Available for:** RSI/RSIII.16 **Grades:** 10-12 **Price:** \$25.00 **Producer:** Compued.

Introduction to Organic Chemistry

Supplements a first course in organic chemistry. Covers nomenclature and simple reactions of organic compounds. Uses animation of laboratory apparatus. **Available for:** APII + .48.D **Grades:** 1-12 **Price:** \$350.00 **Producer:** COMPress, Science Books International, Inc.

MOLEC

Three-dimensional molecular modeling program plus models of 15 organic molecules on disk. Available for: APII + .D Grades: 10 + Price: \$150.00 Producer: Cambridge Development Laboratory.

Organic Chemistry

Seven-disk set supplements a first course in organic chemistry. Provides introduction with practice in nomenclature and simple reactions. Instruction pamphlets included. Disks also sold separately. Available for: APII+.48.D Grades: 10+ Price: \$375.00/set Producer: Science Software Systems, Inc.

Organic Nomenclature

Five drill-and-practice programs on IUPAC nomenclature for alkanes and arenes, amino acids, alkyl derivatives and stereoisomerism. Available for: Most Grades: 10+Price: \$100.00 Producer: Programs for Learning, Inc.

Periodic Table

Covers 103 basic chemical elements. Provides descriptions and history for each element. For Heathkit-Zenith computers. **Available for:** * **Grades:** 9-12 **Price:** \$39.95 **Producer:** Heathkit Education Systems, Zenith Radio Corp.

Periodic Table of Elements

Can be used to introduce students to the Periodic Table of Elements, for review or to refresh the adult's knowledge of chemistry. Uses question-and-answer format. Available for: RSI.16 Grades: 9-12 Price: \$12.95 Producer: Instant Software™, Inc., Wayne Green, Inc.

General Science

Basic Electricity

Presents a lesson on the fundamental concepts of electricity through the use of text and graphics. Contains four parts: a lesson, a puzzle, a quiz and a demonstration. Available for: APII + .48.D Grades: 2-8 Price: \$19.95 Producer: Ideatech Co.

Curve Fitter

Lets user select the most appropriate curve to fit experimental results. Methods include scaling and transformation, averaging, smoothing, interpolation and least squares fitting. Available for: APII.48.D Grades: 11-12 Price: \$35.00 Producer: Interactive Microware, Inc.

Dinosaurs

Disk with six programs: Prehistoric Scene for pre-school. Dinosaur Matching, Di-

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nosaur Hangman, Fire Fight and Graphics for elementary through high school. Available for: APII + .48.D Grades: K-12 Price: \$15.00 Producer: Cross Educational Software.

Energy and Environment

Explores the relationship between energy consumption and human population. Includes 265-page student text. **Available for:** APII/APII + .48.D **Grades:** 8 + **Price:** \$75.00 **Producer:** Science Software Systems, Inc.

pH Meter, Spectro and Wheatstone

Three simulations introduce measurement techniques involving a pH meter, spectrophotometer and Wheatstone Bridge. Designed for pre-lab orientation as well as class demonstration. Available for: APII+.48.D Grades: 10+ Price: \$30.00/ea. Producer: Programs for Learning, Inc.

Science Series

Series of eight science tutorials on the solar system, the human body and health, geology, insects, sound and communications. Available for: PET.8.C, APII/APII+.32.D Grades: 1-6 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Scientific Plotter

Graph-drawing program uses 20 different plotting symbols. User controls length and position of axes, which can be labeled with text or scientific symbols. Available for: APII.48.D Grades: 11-12 Price: \$25.00 Producer: Interactive Microware, Inc.

Scram TM

Simulates nuclear power plant meltdown. **Available for:** AT4.16.C*, AT8.24.C* **Grades:** 8+ **Price:** \$24.95 **Producer:** ATARI, Inc., Home Computer Div.

Sharing Science

Four true/false elementary science programs for two players who try to beat the computer. The computer scores responses and explains each mistake. Program for each grade level. Available for: PET.16.C Grades: 2-5 Price: \$9.95/ea. Producer: Micrograms Inc.

Sungraph

Calculates and graphs sun's position at any location on earth. Options include graphs or tabular output or elevation vs. time of day, maximum elevation vs. date and elevation at azimuth vs. date. **Available for:** IBM.64.D, APII + .48.C/D, RSI/RSIII.16.C/D **Grades:** 9-12 **Price:** \$49.00 **Producer:** Solartek.

Sunheat1

Interactive program allows user to configure and evaluate solar hot water systems. Available for: APII.48.D, RSII.16.D, IBM.64.D Grades: 9-12 Price: \$29.00 Producer: Solartek.

Sunsim-4

Calculates energy available from the sun hourly and demonstrates its use for domestic space heating, cooling and hot water heating. Student specifies conditions such as area and angle of collector. Available for: IBM.64.D, APII+.48.D, RSII.RSIII.16.D Grades: 9-12 Price: \$59.00 Producer: Solartek.

EQUIPMENT CODES

Example:

Available for: APII.48.D

Available ioi. Al II.40.D	
Machine codes used:	
Apple I	API
Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
1501	
Minimum internal memory:	
4K bytes	4
8K bytes	8
16K bytes	16

Minimum peripherals needed:

D

Cassette player

Contact producer

Disk drive

Three Mile Island

Simulates a nuclear reactor. User controls the reactor, trying to make a profit and avoid meltdown. Available for: APII.48.D Grades: 9-12 Price: \$39.95 Producer: Muse Software.

TRIBBLES

Introduces the scientific method through written tutorial and computer simulation. Package includes five copies of the student tutorial. Available for: APII.48.D Grades: 10 + Price: \$35.00 Producer: CONDUIT.

Vidichart

Allows user to display and manipulate raw laboratory data. Available for: APII.48.D Grades: 11-12 Price: \$75.00 Producer: Interactive Microware, Inc.

Geology and Astronomy

AstroLab

Two units on celestial mechanics. *Planetary Motion* plots elliptical orbits of one or two planets. *Three-body Orbits* displays the motion of three bodies interacting gravitationally in four modes. **Available for:** APII+.48.D **Grades:** 9+ **Price:** \$95.00/ea. **Producer:** EduTech.

Astronomy

Introduction to astronomy covering planets, stars, galaxies, solar systems and constellations. Includes testing and grading routines and a teacher's guide. Available for: RSI/RSIII.16.C/D Grades: 7-12 Price: \$30.00 Producer: Concept Educational Software.

Astronomy Package I

Package of three programs contains data on 420 stars, nebulae and galaxies, and includes astronomy handbook and user's manual. Available for: RSI/RSIII.16.C/D Grades: 9-12 Price: \$24.95 Producer: Micro Learningware.

Earth Science Computer Learning Series

Color graphic simulations review oceanography, geology, meteorology and astronomy. Has documentation with follow-up lab activities keyed to a major

earth science text. Sold individually or as a set. **Available for:** APII + .48.D **Grades:** 8-12 **Price:** \$49.00/ea. **Producer:** Educational Computing Systems, Inc.

Earth Science Series

Twelve programs cover topics such as gradients, seismic waves, stream erosion. Lab aid program uses student data to calculate and graph 20 common formulae. Available for: RSI/RSIII.16.C/D Price: \$78.50 Producer: TYC Software.

Geology Package I

Package of four basic geology programs: duration of epochs and periods, types of animal life, types of plant life and geological conditions. Available for: RSI/RSIII.16.C/D Grades: 9-12 Price: \$24.95 Producer: Micro Learningware.

NEWTON — Satellite Orbits

Shows how applying Newton's second law and law of gravitation leads to the prediction of satellite orbits. Available for: Most.D Grades: 11+ Price: \$35.00 Producer: CONDUIT.

Rendezvous

Simulates an actual space shuttle flight. Includes lift off, orbital rendezvous, approach, alignment and docking. Available for: APII/APII + .48.D, AT8.48.D Grades: 7 + Price: \$39.95 Producer: Edu-Ware Services, Inc.

Shore Features

Tutorial with branching, review, test and graphics acquaints student with geographical features of the shore and beach. Available for: APII/APII + .48.D Grades: 9 + Price: \$24.95 Producer: TYC Software.

TellStar I and II

Locate and identify stars and planets from any location in the world at any time of the day or night. Given location, time and date, draw a high resolution map of the sky. *Tell-Star II* includes multiple star tables. **Available for:** APII + .48.D **Grades:** 7-12 **Price:** From \$39.95 **Producer:** Information Unlimited Software, Inc.

Volcanoes

Simulates the behavior of active and dormant volcanoes and shows the nature and results of volcanologists' investigations. Includes two copies of player's guide, one copy of instructor's guide and master copies of maps. **Available for:** APII + .48.D **Grades:** 7 + **Price:** \$55.00 **Producer:** Science Software Systems, Inc.

Weather Fronts

Tutorial with branching, review, test and color graphics introduces weather fronts, their structure and nature. Available for: APII/APII + .D Grades: 9 + Price: \$24.95 Producer: TYC Software.

World Around Us Science Series

A series of six disks: Understanding Weather, Getting a Charge Out of Electricity, Plants, Gravity, Light and Colors, and Sound. Available for: APII.32.D Grades: 6-12 Price: \$170.00 Producer: Aquarius Publishers, Inc.

Life Sciences

Anatomy

Provides information and tests on all major human systems. Includes graphics, quiz, grading system and teacher's guide. Available for: RSI/RSIII.16.C/D Grades: 7-12 Price: \$30.00 Producer: Concept Educational Software.

BALANCE: A Predator/Prey Simulation

Interactive program introduces students to predator/prey relationships, interrelated variables affecting such relationships and ecological values. Available for: RSI/RSIII.D, APII.D Grades: 8-12 Price: \$59.95 Producer: Diversified Educational Enterprises, Inc.

Biology — Cells

Two-disk program of tutorials, graphic simulations and drills presents the cell as the basic unit of life. Includes teacher's guide and student activity sheets. Available for: APII + .D Grades: 8-12 Price: \$133.00 Producer: Encyclopaedia Britannica Educational Corp.

Biology — Energy and Life

Two-disk program of tutorials and graphic simulations on the topics: *Molecules and Energy, Activation Energy and Enzymes*,

Burning Fast and Slow, ATP, Life Without Oxygen and Respiration. Available for: APII + .D Grades: 8-12 Price: \$133.00 Producer: Encyclopaedia Britannica Educational Corp.

Biology Programs

Fifteen tutorial programs use graphics to review the main topics in high school biology. Student progress is recorded for teacher analysis. Includes user's guide. Available for: APII.48.D Grades: 10 + Price: \$250.00 Producer: J & S Software.

Birdbreed

Genetics program simulates inheritance of color in the parakeet. Provides 16 breeding groups of birds of defined phenotypes. Designed to complement lab experiments. Available for: APII.48.D Grades: 10+Price: \$95.00 Producer: EduTech.

Cells

Two programs, Basic Cell Structure and Cell Division (Binary Fission), illustrate and explain the fundamental parts and functions of a cell in both tutorial and drill formats. Include graphics. Available for: APII.48.C/D, RSI/RSIII.32.C/D, PET.16.D Grades: 5 + Price: \$39.00 Producer: Educational Activities, Inc.

CLASSIFY: Classification Keys for Living Organisms

Exercises help the student understand the underlying logic of classification keys in biology. **Available for:** RSI/RSIII.32.D **Grades:** 7 + **Price:** \$59.95 **Producer:** Diversified Educational Enterprises, Inc.

COEXIST — Population Dynamics

Two simulations: in the first, three populations are modeled to grow independently on identical, limited food resources. In the second, two populations compete for the same limited resources. Student sets parameters. Available for: Most.D Grades: 10 + Price: \$35.00 Producer: CONDUIT.

COMPETE — Plant Competition

Simulation lets students plan and carry out investigations of interactions between flowering plants. Unit includes investigation of both real and simulated plants. Available for: APII.48.D, RSI/RSIII.32.D Grades: 10+ Price; \$35.00 Producer: CONDUIT.

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DI-CROSS: A Simulation of Di-hybrid Crosses

Student runs experiments in which computer generates offspring from di-hybrid genetic crosses. Reinforces *MONOCROSS* concepts and introduces linkage, laws of probability and Mendelian law of independent assortment. **Available for:** RSI/RSIII.32.D **Grades:** 9+ **Price:** \$59.95 **Producer:** Diversified Educational Enterprises, Inc.

DILUTE: A Simulation of a Microbiology Dilution Series

Exercises provide introduction to concepts of concentration, bacterial colonies and dilution. Available for: RSI/RSIII.32.D Grades: 9 + Price: \$59.95 Producer: Diversified Educational Enterprises, Inc.

DNAGEN: A Genetic Code Simulation

The user inputs DNA, RNA or protein sequences and the program outputs the corresponding sequences of the other two as completely as possible. A complete genetic code table may also be printed. Available for: RSI/RSIII.32.D, APII.32.D Grades: 9 + Price: \$49.95 Producer: Diversified Educational Enterprises, Inc.

Ecology Simulations 1 and 2

Two disks of four programs each. First series investigates population growth and control. The second explores pest and disease control, water pollution and diet. **Available for:** Most **Grades:** 7-12 **Price:** \$24.95/ea. **Producer:** Creative Computing Software, Ahl Computing.

ENZYME: A Simulation of the Lock-and-Key Model

Student compares structures of inhibitors to substrate and examines the impact of various inhibitors on the rate of breakdown of substrate. Helps student understand enzyme regulation of chemical activities in an organism. Available for: RSI/RSIII.32.D Grades: 9 + Price: \$59.95 Producer: Diversified Educational Enterprises, Inc.

EVOLUT — Evolution and Natural Selection

Students set parameters such as zygote type

and numbers of generations and observe the simulated process of natural selection and evolution. **Available for:** Most.D **Grades:** 11 + **Price:** \$35.00 **Producer:** CONDUIT.

FLYGEN: A Simulation of Drosophila Genetics

Permits mono- and di-hybrid crosses and cross problems with any of 25 common Drosophila variations. Sex linkage and chromosomal linkage are included. Available for: RSI/RSIII.32.D, APII.32.D Grades: 9 + Price: \$49.95 Producer: Diversified Educational Enterprises, Inc.

Genetics

Program generates random family trees and asks questions regarding genetic inheritance of traits which are then explained. Includes user's manual and a brief overview of genetics. Available for: PET.16.C Grades: 7-10 Price: \$20.00 Producer: Microcomputer Workshops Corp.

Genetics

Two programs, Chromy Bug and Blood Typing, cover gene trait dominance, heredity, blood typing. Require speaker and color display. Available for: APII.32.D* Grades: 4-8 Price: * Producer: TIES: Total Information for Ed. Systems.

Genetics and Evolution Series

Four programs: Genetics, Genetics and Evolution, Mendelian Genetics and Evolution. Illustrate and simulate aspects of genetic variation and evolution. Available for: APII/APII + .48.D Grades: 9 + Price: From \$76.95 Producer: Science Software Systems, Inc.

Genetics with the Computer

Eight programs use tutorial, simulation, drill and practice to teach molecular genetics, inheritance patterns, gene mapping and cross-over, bacterial transformation and chromosome mapping, statistical methods and population genetics. Cross-referenced to commonly used texts. Available for: APII.D Grades: 9+ Price: * Producer: Entelek.

Heart Lab

Program uses animated graphics to simulate a functioning human heart. Provides the student with the opportunity to see the heart in action. **Available for:** APII.48.C/D, RSI/

RSIII.32.C/D, PET.16.C/D **Grades:** 5+ **Price:** \$29.95 **Producer:** Educational Activities, Inc.

The Human Body: An Overview

Animated graphics illustrate text about the systems of the human body. **Available for:** APII.16.C/D, PET.16.C/D **Grades:** 4+**Price:** \$80.00 **Producer:** Brain Box.

Life

Program of the "Game of Life," a game of population growth and change. Includes *Life* and *Super Life*. Biology and economics courses. **Available for:** APII/APII + .48.D **Grades:** 8 + **Price:** \$60.00 **Producer:** Science Software Systems, Inc.

MANRGY: A Simulation of Humans, Energy and Environment

Used to study human cultural evolution, energy needs and environmental impact of different societal types and the productivity of natural and man-made ecosystems. Available for: RSI/RSIII.32.D, APII.32.D Grades: 9 + Price: \$49.95 Producer: Diversified Educational Enterprises, Inc.

MONOCROSS: A Simulation of Monohybrid Crosses

Student runs experiments in which computer generates offspring from monohybrid genetic crosses. Introduces concepts of genotype, phenotype, dominance, incomplete dominance, test cross and Mendelian law of segregation. Available for: RSI/RSIII.32.D Grades: 9 + Price: \$59.95 Producer: Diversified Educational Enterprises, Inc.

MOTHS: The Evolution of the Pepper Moth

Student varies environment throughout experiment to examine influence of selection and mutation on genetic makeup of population. Available for: RSI/RSIII.32.D Grades: 7 + Price: \$59.95 Producer: Diversified Educational Enterprises, Inc.

NICHE: An Ecological Game/Simulation

Introduces the concept of an ecological niche and some of the interrelated variables that determine an organism's niche. Available for: RSI/RSIII.D, APII.D Grades: 6+ Price: \$49.95 Producer: Diversified Educational Enterprises, Inc.

* = Contact producer or distributor



HISTORY OF TECHNOLOGY from Radio Shack describes technological achievements in two volumes. For grades 4-9.

Nucleic Acid Connection

Explores the nature of nucleic acid bases, their function, and the cause and effect of mutations. **Available for:** APII/APII+.48.D **Grades:** 9+ **Price:** \$70.00 **Producer:** Science Software Systems, Inc.

The Nucleic Acids

Explores the nature and function of the principal nucleotides adenine, cytosine, guanine and thymine in DNA, and uracil in RNA. Mutations occur using 11 mutagens to alter the nucleotide bases. Includes student guide. Available for: APII/APII+.48.D Grades: 10+ Price: \$85.00 Producer: Science Software Systems, Inc.

Nutri-Calc™

Dietary nutritional analysis program calculates the nutritional value of food based upon Recommended Daily Allowances. Based on standard USDA listings of 730 common foods. Available for: Most.48.D Grades: 9-12 Price: \$350.00 Producer: PCD Systems, Inc.

Nutrition — A Balanced Diet

Analyzes various daily diets and compares them with the recommended daily allowances. Nutritional data is provided. Available for: APII/APII + .16.D, RSI.C Grades: 6 + Price: \$35.00 Producer: Science Software Systems, Inc.

OSMO: Osmotic Conditions in Red Blood Cells

Student simulates placing of red blood cell in hypertonic, isotonic or hypotonic solution. Computer generates graphic representation of blood cell which student can directly measure. Available for: RSII.RSIII.32.D Grades: 9+ Price: \$59.95 Producer: Diversified Educational Enterprises, Inc.

Osmosis

Simulation examines the flow of matter across a semipermeable membrane. Covers the basics of random motion and diffusion. Students identify and control the factors that influence movement into and out of the cell. **Available for:** APII/APII + .16.D, RSII.C **Grades:** 10 + **Price:** \$40.00 **Producer:** Science Software Systems, Inc.

Parts of the Microscope

Teaches student to identify parts of a microscope by location and function. Uses graphic representation of microscope. Also available on cassette. **Available for:** APII.48.D, RSI/III.32.C/D, PET.16.C/D **Grades:** 5-8 **Price:** \$19.95 **Producer:** Educational Activities, Inc.

PLANT: A Plant Growth Simulation

Introduces the scientific method and controlled experimentation through interaction with a simulated plant growth experiment. Available for: RSI/RSIII.D, APII.D Grades: 8-12 Price: \$59.95 Producer: Diversified Educational Enterprises, Inc.

POLLUTE: The Impact of Pollutants on Bodies of Water

Student varies water temperature, type of waste, type of waste treatment, type of receiving body of water and rate of waste dumping to determine impact of pollutants on the oxygen content of a body of water and on fish. Available for: RSI/RSIII.32.D Grades: 7 + Price: \$59.95 Producer: Diversified Educational Enterprises, Inc.

Pollution

Two simulation programs consider carbon monoxide pollution in an urban environment and the effects of pollutants on aquatic life. Includes teacher's guide. Available for: APII/APII + .16.D Grades: 9 + Price: \$70.00 Producer: Science Software Systems, Inc.

POPGEN: A Population Genetics Simulation

Based on the Hardy-Weinberg Law. User systematically violates any of the four Hardy-Weinberg Law conditions and observes the effects on gene, genotype and phenotype frequencies over time. Available for: RSI/RSIII.32.D, APII.32.D Grades: 9 + Price: \$49.95 Producer: Diversified Educational Enterprises, Inc.

POPGRO: A Population Growth Simulation

Introduces population growth and progressive refinement of scientific models. The three models are unlimited growth, limited growth and limited growth with time lag. Available for: RSI/RSIII.32.D, APII.32.D Grades: 9 + Price: \$49.95 Producer: Diversified Educational Enterprises, Inc.

Population Fluctuations

Manipulates limiting and balancing factors such as birth rate, density and initial numbers according to different growth rates. **Available for:** APII/APII + .16.D **Grades:** 7 + **Price:** \$30.00 **Producer:** Science Software Systems, Inc.

Population Growth, ABC Profiles, Interactions and Growth

Four programs simulate population dynamics: completion, interaction, environmental effects. For biology, economics, environmental science courses. Available for: APII/APII + .48.D Grades: 10 + Price: From \$60.00/ea. Producer: Science Software Systems, Inc.

Reproduction Process

Descriptive tutorial graphically traces the development of a new person from conception to birth. Includes spot quizzes. Available for: APII+.32.D Grades: 6-10 Price: \$29.95 Producer: Micro Power & Light Co.

What's in Your Lunch?

The computer analyzes and graphically represents the nutrient value of the user's lunch. Results are individualized by user's age, height, sex and estimated activity level. **Available for:** Most **Grades:** 4 + **Price:** \$25.00 **Producer:** Math and Computer Education Project.

Physics

Basic Electricity

Three programs, Series, Parallel, Network, provide practice in calculating current and voltage in D.C. circuits. Available for: APII + .48.D Grades: 10 + Price: \$50.00/ea. Producer: Programs for Learning, Inc.

Entelek Computer-Based Physics Lab

Ten programs that do data reduction for physics experiments. Available for:

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APII.D Grades: 9+ Price: \$80.00 Producer: Entelek.

Flight Vector

Game and tutorial teach students about vectors and how they combine. The game allows student to control a plane's velocity vector to try to reach a destination. Available for: APII+.48.D* Grades: 7-12 Price: \$19.95 Producer: Edu-Soft, Steketee Educational Software.

Fourier Analysis I and II

Vol. I includes a tutorial and demonstration. Vol. II requires an A/D and D/A 8-bit converter to turn Apple into spectral analyzer. Also sold as set. Available for: APII + .48.D Grades: 12 + Price: \$95.00/ea. Producer: EduTech.

General Physics Set

Eleven disks with over 70 tutorial programs. Extensive graphics. Manual with each disk. Available for: APII + .48.D Grades: 12 Price: \$200.00 Producer: Cross Educational Software.

Harmonic Motion

Uses pendulum mounted on a rotational potentiometer to explore harmonic motion. Package includes disk, pendulum and student manual. Available for: RSIII.D Grades: 10-12 Price: \$95.00 Producer: Cambridge Development Laboratory.

Interpreting Graphs in Physics: Position and Velocity Time

Problem-solving exercises in kinematics. Available for: RSIII.32.D Grades: 9-12 Price: \$29.95 Producer: Radio Shack.

Laws of Motion

Students experiment with the inclined plane, free fall and A-machine to discover and test motion concepts. Variables include: mass of the block and bucket, angle of the inclined plane, friction and net force. Includes two disks. **Available for:** APII/APII+.48.D **Grades:** 9+ **Price:** \$99.50 **Producer:** Science Software Systems, Inc.

Physical Science Series

Three programs investigate density, Rutherford atom and light waves. Includes teacher's guide. **Available for:** APII/ APII+.16.D **Grades:** 10+ **Price:** \$65.00 **Producer:** Science Software Systems, Inc.

Physics

Sixteen programs cover force and motion, sound, light and optics, the elements and their atoms, nuclear physics and relativity. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 11 + Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Physics CompuLab

Six computer-simulated physics experiments: Parabolic Motion, Statistics, Nonconstant Acceleration, Planetary Motion, Wave Motion and Electric Field. Also available separately. Includes student manuals. Available for: APII+.48.D Grades: 10+ Price: \$350.00 Producer: EduTech.

Physics Demos

Four disks demonstrate various physical phenomena. Cover mechanics, geometrical optics, advanced physics, and optics, wave motion and electricity. **Available for:** APII + .48.D **Grades:** 11 + **Price:** \$65.00/ ea. **Producer:** EduTech.

Physics Examples I

Uses graphics to introduce four introductory physics concepts. Suitable for individual use or classroom demonstrations. Available for: AT8.C/D* Grades: 9-12 Price: \$39.95 Producer: Jadee Enterprises.

Physics InterAct

Three programs designed to provide problem-solving activities for entire class: *Vectors, Target* and *Oil Drop.* Each includes student manual. **Available for:** APII + .48.D **Grades:** 10-12 **Price:** \$95.00/ea. **Producer:** EduTech.

Physics — Kinematics

Drills student on the four basic equations representing uniformly accelerated motion in one dimension. Includes quiz, grading system and teacher's guide. Available for: RSI/RSIII.16.C/D Grades: 9-12 Price: \$30.00 Producer: Concept Educational Software.

Physics I Diskette

Fourteen programs covering topics from linear kinematics to pulley system machine to vector analysis. Individual program available on cassette. Available for APII.16.D, PET/CBM.8.D, RSI RSIII.16.D Grades: 11 + Price: \$180.00 Producer: Microphys Programs.

Physics II Diskette

Seventeen programs cover topics from ther modynamics to mirrors and lenses to circuit analysis to photoelectric effect. Individual programs available on cassette. **Available for:** APII.16.D, PET/CBM.8.D, RSI/RSIII.16.D **Grades:** 11 + **Price:** \$180.00 **Producer:** Microphys Programs.

Physics — Wave Motion

Drill and practice with waves, frequency, wave lengths, transverse waves, longitudinal waves, resonance and the Doppler Effect. Randomly generates problems. Includes grading system and teacher's guide. Available for: RSI/RSIII.16.C/D Grades: 9-12 Price: \$30.00 Producer: Concept Educational Software.

Physics with the Computer

Thirty programs employ simulation, drill and practice, and lab exercises in mechanics, electricity, magnetism, heat, waves, light, relativity and modern physics. Available for: APII.D Grades: 10+ Price: \$150.00 Producer: Entelek.

SCATTER — Nuclear Scattering

Simulations of three experiments give students experience in deducing the size, shape and force law of a single scattering center, and the scattering of alpha particles by a metal foil. Available for: Most.D Grades: 11 + Price: \$35.00 Producer: CONDUIT.

Science

Two science programs introduce students to basic principles of atomic structure and to principles and applications of three simple machines. Available for: PET/C64.16.C/D Grades: 6 + Price: \$14.95/ea. Producer: Micro-Ed, Inc.

Science Package I

Four science programs include an Ohm's Law practice program, a metric quiz and a physics lab project. **Available for:** RSI/RSIII.16.C/D **Grades:** 9-12 **Price:** \$24.95 **Producer:** Micro Learningware.

Science Series

Five disks on astronomy and physics: Astronomy I and II (tutorial), Free Fall (the effects of gravity), Wave Optics (light properties) and Lab Plots. Sold separately or as a set. Available for: APII.48.D Grades: 7 + Price: \$140.00/set Producer: Educational Courseware.

Social Studies

Across the Plains

Set of four social studies programs provides information about the westward movement using game format. Uses real places and events. Two players, **Available for:** PET/C64.16.C/D **Grades:** 5+ **Price:** \$39.95 **Producer:** Micro-Ed, Inc.

American History: The Decades Game

Players learn historical data as they determine the dates of events. Three series, five games each. **Available for:** APII.16.C/D, PET.16.D **Grades:** 9 + **Price:** \$50.00/series **Producer:** Brain Box.

Astro Word Search: Geography

Player locates geographical place names in a word maze. **Available for:** AT8.16.C/D, APII.32.D **Grades:** 7 + **Price:** \$23.95 **Producer:** Program Design, Inc.

Change Agent

Simulation/game helps student understand the role of a change agent and the strategies used to accomplish diffusion of innovation. **Available for:** RSI/RSIII.32.D **Grades:** 11 + **Price:** \$40.00 **Producer:** CONDUIT.

Demo-Graphics

Simulations can be used to present current and historical demographic data for many nations, to project multinational populations given current trends and to facilitate understanding of population/resource relationships. Available for: APII.48.D Grades: 11 + Price: \$85.00 Producer: CONDUIT.

Diffusion Game

Interactive computer game about the diffusion of innovations, particularly the role of change agents in securing adoption of the innovation. Available for: APII.48.D Grades: 11 + Price: \$55.00 Producer: CONDUIT.

Energy Czar™

Simulation places player in role of government official responsible for U.S. energy policy. Economic growth, public opinion and inflation rate reflect success of player's decisions. Requires ATARI 410[™] Program Recorder. Available for: AT4/AT8.16.C* Grades: 9-12 Price: \$14.95 Producer: ATARI, Inc., Home Computer Division.

The Exploring of America

American history series includes the programs Christopher Columbus, Settling the New World, Daniel Boone, Lewis and Clark, Western Expansion and North to Alaska. Programs also available separately. Available for: APII.D, RSI/RSIII.C Grades: 5-12 Price: \$169.00 Producer: Aquarius Publishers, Inc.

Free Enterprise

In this simulation game, players run up to six competing companies. Management decisions based on computer-generated quarterly reports determine which company succeeds. Group or individual play. Three levels of difficulty. Available for: APII + .48.D, IBM.D Grades: 10 + Price: \$60.00 Producer: SRA, Science Research Associates, Inc.

Geography Explorer: USA

The program displays computer-generated maps of the United States, its seven regions and individual states. It utilizes a light pen. Questions may be in multiple choice, recognition or fill-in format. Available for: RSI.16.D.* Grades: 4+ Price: \$49.95 Producer: Instant Software™, Inc., Wayne Green, Inc.

Geography Terms

Up to three students compete in Elementary Bowl game. Teaches common geographic terms. Available for: PET.8.C Grades: 4-5 Price: \$9.95 Producer: Micrograms Inc.

Hail to the Chief

Simulation of presidential campaign. Player sets week-by-week strategy in bid for presidency. Package includes models of varying complexity, each of which can be used at 10 levels of difficulty. **Available for:** Most

Grades: 7-12 **Price:** \$24.95 **Producer:** Creative Computing Software, Ahl Computing.

Hat in the Ring

Two-player presidential election game in which each player takes the part of a candidate and makes campaign decisions. Available for: PET/C64.8.C/D Grades: 6+Price: \$9.95 Producer: Micro-Ed, Inc.

A Historical Dating Game

Three disks contain five games in which students determine dates of events in American politics, economics, technology, science and art. Available for: APII+.16.D, PET.16.D Grades: 9+ Price: \$165.00 Producer: Computer Courseware Services, Div. EMC Publishing.

History and Geography Package

Package of five programs: States and Capitals, Presidents, Regions of the U.S., Countries and Revolutionary War Quiz. Available for: RSI/RSIII.16.C/D, RSC.16.C, APII.32.D Grades: 4-8 Price: \$24.95 Producer: Micro Learningware.

EQUIPMENT CODES

Example:

Available for: APII.48.D

At an and the second	
Machine codes used:	
Apple I	API
Apple II	APII
Apple II Plus	APII+
Apple III	APIII
TRS-80 Model I	RSI
TRS-80 Model II	RSII
TRS-80 Model III	RSIII
TRS-80 Color Computer	RSC
ATARI 400	AT4
ATARI 800	AT8
Commodore PET	PET
Commodore VIC-20	VIC
Commodore-64	C64
Commodore Business	
Computer	CBM
IBM Personal Computer	IBM
Texas Instruments 99/4	
Computer	TI
Texas Instruments 99/4A	
Computer	TIA
Most personal computers	Most
Minimum internal memory:	,
4K bytes	4
8K bytes	8
16K bytes	16
etc.	

D

Minimum peripherals needed:

Cassette player

2 SOFTWARE social studies

History of Technology

Describes technological achievements through graphics, text and recorded speech. Two volumes. Available for: RSC.16.C Grades: 4-9 Price: \$94.95/ea. Producer: Radio Shack.

Kingdom™

Economic simulation of an agricultural kingdom. Player determines farming strategy. If successful, player reigns another term. Requires ATARI 410[™] Program Recorder. Available for: AT4/AT8.8.C* Grades: 7-12 Price: \$14.95 Producer: ATARI, Inc., Home Computer Div.

Market Place

Four simulation programs put students in the role of decision makers with a variety of choices to evaluate in the areas of economics pricing, marketing, advertising and profit. Includes manual with worksheets and sample programs. Available for: AT4/AT8.D Grades: 3-8 Price: \$37.60 Producer: Minnesota Educational Computing Consortium (MECC).

Match Master

Students discover facts about American inventors, black Americans, explorers, presidents, famous women, etc. Ten programs available. Available for: PET.16.C Grades: 4+ Price: \$9.95/ea. Producer: Micrograms Inc.

Micromap II

Interactive mapmaking system that allows creation of maps and graphs, including contour, proportional circle, polyhedron and perspective views of terrain models. Requires graphics tablet. Available for: AP.48.D* Grades: 7-12 Price: \$650.00 Producer: Morgan-Fairfield Graphics.

The Prisoner

Plays games concerned with brain-washing techniques, surveillance devices, plots, delusions and paradoxes. Available for: APII/APII + .48.D Grades: 6 + Price: \$29.95 Producer: Edu-Ware Services, Inc.

* = Contact producer or distributor

The Search Series

Five simulation programs promote critical thinking skills while teaching social studies and science concepts: Geography Search, Geology Search, Community Search, Energy Search and Archeology Search. Available for: APII+.48.D, RSIII.32.D Grades: 5-12 Price: \$180.00/ea. Producer: McGraw-Hill Book Co., Webster/McGraw-Hill Div.

Social and Economic Simulations

Three programs: Limits projects world resource needs given different rates of growth and consumption. Market simulates competitive product marketing. USPOP presents demographic data and makes population projections. Available for: Most Grades: 7-12 Price: \$24.95 Producer: Creative Computing Software, Ahl Computing.

Social Studies Series

Series of ten social studies tutorials covers farm life, transportation, holidays, polar and desert regions, American Indian tribes, American states, Greek and Roman civilizations and the Middle Ages. Available for: PET.8.C, APII.32.D Grades: 1-6 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

States

Two contestants are quizzed on state facts. One program for each state. **Available for:** PET.8.C **Grades:** 4+ **Price:** \$9.95/ea. **Producer:** Micrograms Inc.

States and Capitals

Game quizzes students on state names and capitals. Uses graphics. **Available for:** PET/C64.8.C/D **Grades:** 4 + **Price:** \$7.95 **Producer:** Micro-Ed, Inc.

States and Capitals and European Countries and Capitals

Two programs. Computer draws map. Player must identify country and name capital. Requires ATARI 410™ Program Recorder. Available for: AT4/AT8.16.C* Grades: 4 + Price: \$14.95 Producer: ATARI, Inc., Home Computer Div.

The States Game

Five games provide facts about the states. For one-to-four players. **Available for:** APII.16.C/D, PET.16.C/D **Grades:** 4 + **Price:** \$50.00 **Producer:** Brain Box.

Terrorist

Simulates the confrontation between terrorist and authority to the last detail: success or failure rides on each player's ability to assimilate data and comprehend issues. Three scenarios. Available for: APII/APII+.48.D Grades: 6+ Price: \$29.95 Producer: Edu-Ware Services, Inc.

This Land Is Yours

Game for one-to-four players teaches about the states. Available for: APII + .16.D, PET.16.D Grades: 4 + Price: \$55.00 Producer: Computer Courseware Services, Div. EMC Publishing.

United States Geography

Teaches, drills and grades the student on states, state capitals, major cities, rivers, mountain chains, lakes, national parks and state borders. Includes graphics and teacher's guide. Available for: RSI/RSIII.16.C/D Grades: 4-8 Price: \$35.00 Producer: Concept Educational Software.

United States Presidents

Gives history of and quizzes on U.S. presidents. Includes grading system and teacher's guide. Available for: RSI/RSIII.16.C/D Grades: 5-12 Price: \$30.00 Producer: Concept Educational Software.

U.S. Government

Sixteen programs review U.S. government from the development of a constitution through the organization of government on a local, city, state and federal level. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 5 + Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

U.S. History

Sixteen programs survey U.S. history from Colonial Period through the Atomic Age. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 5 + Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

U.S. Presidents

Reviews facts about U.S. presidents in study and quiz modes. For Heathkit-Zenith computers. Available for: * Grades: 6-12 Price: \$39.95 Producer: Heathkit Education Systems, Zenith Radio Corp.

World Geography

Teaches, drills and grades the student on major countries, world cities, rivers, mountain chains, major lakes, oceans and country borders. Teacher's guide provided. Available for: RSI/RSIII.16.C/D Grades: 5-9 Price: \$35.00 Producer: Concept Educational Software.

World History

Sixteen programs review world historical developments from prehistoric through contemporary times. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 5+ Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Systems Software

APPILOT II

Systems software includes graphics, builtin student timer, light pen input, text and voice capability. **Available for:** APII.48.D **Price:** \$99.95 **Producer:** Muse Software.

Apple Logo

Language software and two manuals offer a version of Logo, a language designed for young children. Available for: APII/APII + .64.D Grades: K + Price: \$175.00 Producer: Logo Computer Systems, Inc.

Apple PILOT

Computer language designed for creating computer-assisted instruction. Includes color graphics, sound effects, character set and student management capabilities. Available for: APII.48.D Price: \$150.00 Producer: Apple Computer, Inc.

ATARI PILOT

Programming language uses commands based on everyday English. Includes turtle graphics. Uses sound and color. Requires ATARI 410™ Program Recorder. Available for: AT4.16.C/D* Grades: 3+ Price: \$129.95 Producer: ATARI, Inc., Home Computer Div.

Character Generator

Allows user to design and display character set on the hi-res screen using PRINT statements. The character generator becomes part of BASIC program. **Available for:** APII + .32.D **Price:** \$19.95 **Producer:** Edu-Soft, Steketee Educational Software.

Classroom Monitor

Classroom networking software lets up to 63 Apples share one disk and one printer. Lets teacher monitor student's work. Requires Corvus OMNINET System. Available for: APII.48.D* Price: \$375.00 Producer: Software Connections, Inc.

Copy-Tape

Duplicates software tapes. For teachers, administrators and students. **Available for:** RSI/RSIII.16.C **Grades:** 6-12 **Price:** \$9.95 **Producer:** Modtec.

Disk Zap

Utility program allows Apple Pascal user to find and restore programs removed from a disk by mistake, to repair damaged directories, etc. Available for: APII.64.D* Price: \$29.95 Producer: Edu-Soft, Steketee Educational Software.

Easy

Allows Apple to function as an interactive terminal receiving records from or sending them to other computers hooked into a network. Requires Apple Pascal and Communication Cards. Available for: APII+.48.D* Price: From \$100.00 Producer: Edunet, EDUCOM.

Menu Maker

Allows users to develop a menu for programs on their disk, including brief descriptions of programs. Indicates percentage of free space left on disk. Will alphabetize programs and print copy of menu descriptions. Available for: APII + .48.D* Price: * Producer: TIES: Total Information for Ed. Systems.

MIT'S Logo for Apple

Version of the child-oriented Logo language developed at MIT. Utilities and tutorial provided. **Available for:** APII/APII+.64.D **Grades:** K+ **Price:** \$149.95 **Producer:** Krell Software Corp.

MVP-FORTH

A package of books and disk for learning the FORTH language. Available for: Most.D Grades: 11-12 Price: \$100.00 Producer: Mountain View Press, Inc.

Pascal Speed-up Kit

Hardware/software package increases the speed of compiling Apple Pascal programs. Includes editor, filer and *The Mill* coprocessor board. Allows multi-users and multitasking. **Available for:** APII.* **Grades:** 9+ **Price:** \$369.00 **Producer:** Stellation Two.

PTERM

Transforms PET or CBM computer into a full duplex ASCII terminal that can access commercial time sharing systems and bulletin boards. Requires modem. Available for: CBM/PET.8.C/D* Price: \$24.00 Producer: TNW Corp.

Terrapin Logo Language

Computer language enables the user to program immediately. Teaches geometry, problem solving, computer literacy, art. Appropriate for young children. Includes 150-page tutorial and a technical manual. Available for: APII.48.* Grades: 1 + Price: \$149.95 Producer: Terrapin, Inc.

32K Structured BASIC

Easy-to-use language for teaching programming. Available for: * Grades: 9-12 Price: \$195.00 Producer: Cromemco, Inc.

TI Logo

Child-appropriate programming language develops computer awareness, as well as math, logic and communication skills. Program module requires Memory Expansion Unit. Available for: TIA.16.* Grades: 2+ Price: \$299.95 Producer: Texas Instruments, Inc., Personal Computer Div.

The UCSD p-System™ Version IV

A stand-alone operating system and Pascal software development package that includes turtle graphics for easy programming and *SofTeach*, a computer-aided instruction program. **Available for:** Most.48.D **Price:** From \$375.00 **Producer:** SofTech Microsystems, Inc.

UNERA

Allows users of CP/M systems to recover ERAsed files. User manual provided. Available for: Most.D* Price: \$75.00 Producer: Elliam Associates.

The Voice

Provides vocabulary of spoken words that can be used in programming. User can add words. **Available for:** APII/APII + .48.D **Price:** \$39.95 **Producer:** Muse Software.

2 SOFTWARE systems software

XPTERM

Transforms PET or CBM computer into full duplex ASCII terminal with file handling capabilities. Requires modem. **Available for:** CBM/PET.32.C/D* **Price:** \$54.00 **Producer:** TNW Corp.

Vocational and Business Education

Audio-Visual Equipment

Five-part program demonstrates use of audiovisual equipment, including the computer. **Available for:** APII.48.D **Price:** \$29.95 **Producer:** Avant-Garde Creations.

Automotive Diagnosis

Uses question/answer format to assist user in diagnosing most automobile problems. Available for: APII.16.D Grades: 9-12 Price: \$19.95 Producer: Powersoft Inc.

Business Communication

Sixteen programs cover such things as format of business communications, handling routine pleasant and unpleasant subjects, report writing and planning. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 11 + Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Business Package I and II (Apple)

Two packages of four programs each cover loan amortization, bank reconciliation, stock market simulation, depreciation and annuities. Available for: APII.32.D Grades: 9-12 Price: \$24.95/ea. Producer: Micro Learningware.

Business Package I and II (TRS-80)

I is a tutorial covering basic accounting, double entry concept, journals, ledgers, and financial statements. *II* has four programs covering financial calculations and a stock market simulation. **Available for:** RSI/RSIII.16.C/D **Grades:** 9-12 **Price:** \$24.95/ea. **Producer:** Micro Learningware.

Business Package III

A general ledger accounting system for charting accounts, making journal entries and printing financial statements. Available for: RSI/RSIII.32.D, APII.32.D Grades: 9-12 Price: \$24.95 Producer: Micro Learningware.

Carpentry

Tutorial shows student how to draw plans for and construct a house. Also teaches about tools, safety and problems of carpentry. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 8 + Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Construction

Tutorial covers topics such as masonry, motors, tools, estimation, electrical wiring and plumbing. Requires Dorsett's Educational System Master Cartridge. **Available for:** AT4/AT8.4.C* **Grades:** 6+ **Price:** \$79.00 **Producer:** Dorsett Educational Systems, Inc.

EDU-CAD

Software package for two-dimensional drafting. Requires joystick and Apple graphics screen. For pre-engineering or vocational education. Available for: APII+.D* Grades: 9-12 Price: \$195.00 Producer: T & W Systems, Inc.

Enterprise Sandwich Shops: A Marketing Simulation

Instructor-controlled simulation uses a fictional company of sandwich shops to stimulate student interest in marketing, retailing, management and entrepreneurship. Available for: APII.48.D Grades: 10-12 Price: * Producer: McGraw-Hill Book Company, Gregg/McGraw-Hill.

First Aid and Safety

Teaches the basic rules of first aid and safety. Covers care of fractures and of shock victims and moving injured people. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 7-9 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Health Services Career

Tutorial provides information about anatomy, blood tests, injections and how to communicate with a medical team. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 9-12 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Market Simulation

Simulation places two contestants in business competition. Players choose amount of advertising, volume of production, etc. Strikes and economic changes add realism. Available for: TIA.16.C/D Grades: 9-12 Price: \$19.95 Producer: Texas Instruments, Inc., Personal Computer Div.

Master Type ™

Typing instruction program in game format. Seventeen lessons progress from home letter recognition to eight-letter words. **Available for:** APII.48.D, AT8.32.D **Grades:** 7 + **Price:** \$39.95 **Producer:** Lightning Software.

Micro Typing II

Ready-made lessons teach the keyboard, count errors and monitor speed. Creates and scores personal lessons. On-screen editor for ease in correcting. Available for: APII.32.D, AT8.32.D, RSI/RSIII.32.D Grades: 7-12 Price: \$19.95 Producer: Hayden Software, Hayden Book Company.

Msss D Software

Interactive instructional materials to accompany Coronet filmstrips: Investigating Electricity, Energy and Our Environment, Shop Safety, Consumer at Large, Shop Measuring Instruments, Engine Lathe. Requires Msss D Interface II. Available for: APII.48.* Grades: 6-9 Price: \$75.00/ea. Producer: Msss D, Inc.

Numeric Data Entry Practice

Helps students increase speed and accuracy on a standard numeric keypad. Includes disk-based recordkeeping system. Available for: RSII.16.C Grades: 6-12 Price: \$39.95 Producer: Radio Shack.

Office Careers

Sixteen tutorials demonstrate word-processing, typing techniques, writing collection letters and applying for a job. Require Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 8 + Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Profit and Loss: A Microcomputer **Simulation**

Teacher-administered simulation introduces economic concepts. For use in free enterprise, economics, general business and retailing courses. Available for: APII + .48.D, RSIII.D Grades: 10-12 Price: * Producer: McGraw-Hill Book Company, Gregg/McGraw-Hill.

Touch Typing

Two cassettes provide step-by-step instructions to familiarize user with the typewriter keyboard. User builds skill and speed at own pace. Three levels of difficulty. Requires ATARI 410™ Program Recorder. Available for: AT4/AT8.16.C* Grades: 6+ Price: \$24.95 Producer: ATARI, Inc., Home Computer Div.

Touch Typing

Develops typing skills. Individually paced. Available for: RSI/RSIII.C/D Grades: 3+ Price: \$24.95 Producer: Cove View Press.

Trucker and Streets of the City

Two simulations. In Streets, player must complete 10-year plan of street and transit improvements without alienating City Commission. In Trucker, player must keep on schedule in coast-to-coast trip despite bad weather, flat tires, etc. Available for: Most Grades: 7-12 Price: \$24.95 Producer: Creative Computing Software, Ahl Computing.

Typing

Provides instruction on finger placement and drill for touch typing on the Apple keyboard. Drills are graduated in difficulty, beginning with home base keys and progressing through a sequence of words and phrases. Available for: APII + .32.D Price: \$19.95 Producer: Teck Associates.

Typing Teacher

Seven-part package takes student from initial familiarization with the keyboard through typing words and phrases to mastery of the keyboard. Available for: RSI/ RSIII.16.C Grades: 3+ Price: \$12.95 Producer: Instant Software ™, Inc., Wayne Green, Inc.

Typing Teacher

Teaches students the typewriter or keyboard. Displays relevant keyboard positions. Progresses through eight practice levels with 10 exercises at each level. Available for: APII.48.D Grades: 5+ Price: \$14.95 Producer: Compu-Tations

Typing Tutor

A keyboard in graphics appears on the screen. A letter flashes which the student must match before the next letter flashes. Includes typing tests. Available for: RSI/ RSIII.C Grades: 5-12 Price: \$34.95 Producer: Aquarius Publishers, Inc.

Versaform

Develops business form on display screen. Prepares analytic and management reports. Tutorial package can be used with students to show "how to" in business environment. Available for: APII.64.D*, APIII.128.D* Grades: 11-12 Price: \$389.00 Producer: Applied Software Technology.

Warrior Words

Arcade-type game for typing practice. Available for: PET.8.C Grades: 3+ Price: \$9.95 Producer: Micrograms Inc.

Word **Processors**

Apple Writer

Turns Apple into text editor with ability to create, edit and print documents. Includes introductory tutorial on various features. Available for: APII.48.D Price: \$75.00 Producer: Apple Computer, Inc.

ATARI Word Processor

Two-disk word processing system. Printer and 850 interface required. Available for: AT4.48.D* Price: \$149.95 Producer: ATARI, Inc., Home Computer Div.

Copy-Writer

Word processor with professionals features. Available for: PET.D Price: \$189.95 Producer: CGRS Microtech, Inc.

DART: Disk Apple II Report Textwriter with Edit II

Complete editing and word processing sys-

tem. DART and Edit II available separately. Available for: APII.32.D Price: \$37.89 Producer: Services Unique, Inc.

Letter/Report Writer Program

Word processor for TRS-80 computers handles up to 300 lines of text. Uses six editing codes. Includes on-screen identification of uppercase letters for unmodified Model I keyboards. Available for: RSI/RSIII.32.D Price: \$17.50 Producer: DeZoysa Enterprises.

Parent Reporting

Word processor lets teachers write personalized messages to parents. Reports include notice of grade in up to four categories. Requires printer. Available for: APII + .48.D.* **Price:** \$39.95 **Producer:** Hartley Courseware, Inc.

Supertext

Word processor with 28 features and highlights. Special form letter module available separately. Available for: APII.48.D Price: \$150.00 Producer: Muse Software.

EQUIPMENT CODES

Example: Available for: APII.48.D

Machine codes used: Apple I API APII Apple II APII+ Apple II Plus Apple III APIII TRS-80 Model I RSI RSII TRS-80 Model II TRS-80 Model III RSIII TRS-80 Color Computer RSC AT4 ATARI 400 ATARI 800 AT8 Commodore PET PET Commodore VIC-20 VIC C64 Commodore-64 Commodore Business CBM Computer IBM Personal Computer **IBM** Texas Instruments 99/4 TI Computer Texas Instruments 99/4A TIA Computer Most personal computers Most Minimum internal memory:

4K bytes 8K bytes

16 16K bytes etc.

4

8

Minimum peripherals needed:

Cassette player Disk drive D Contact producer

2 SOFTWARE word processors

Write Away

Word processor has both edit and format modes. Will work faster with extra 16K memory, but not required. Available for: APII + .48.D Price: \$175.00 Producer: Avant-Garde Creations.

Other Software

ACT Preparation and Review Program

Preparation and review program for American College Test for individual student use, independent of teacher assistance. Skill areas: mathematics, English, science, social studies. Available for: APII, RSIII Grades: 10-12 Price: \$795.00 Producer: Educational Software & Marketing Co.

Alpha-Plus

Individualized, computer-managed curriculum in elementary mathematics and reading. Includes all diagnostic tests, lessons, mastery tests and manuals. Requires printer, card reader and dual disk drives. **Available for:** APII.64.D* **Grades:** 3-10 **Price:** From \$8000.00 **Producer:** Alpha II, Inc.

CAI Programs Volumes I and II

Two packages of four and three programs respectively include spelling, math, geography and music programs. Available separately on cassette or together on disk. Available for: APII.16.C, APII.48.D Grades: 4-7 Price: \$24.95 Producer: Creative Computing Software, Ahl Computing.

CDC Basic Skills Learning System

Full reading, language arts and math curricula currently run on Control Data 110 microcomputers and terminals. Will be available for other microcomputers in early 1983. Available for: * Grades: 3 + Price: * Producer: Control Data Corporation.

CDC High School Skills

Remedial/enrichment curricula in reading, math, language arts, social studies and sci-

ence. Currently for CDC computers. Available for other microcomputers in early 1983. Available for: * Grades: 9 + Price: * Producer: Control Data Corporation.

CHAMPS™: A Football Scouting Program

Stores and analyzes football scouting information. Prints listings, tendency charts and statistical reports. Available for: RSIII.48.D Price: \$149.95 Producer: Radio Shack.

Collectibles I

A package of three programs: Gomoku, an ancient, challenging board game. Tightrope Politics, a simulation of political decision making. Odd Shape Out, a shape recognition challenge for all ages. Available for: RSI.C, RSIII.D Grades: K-12 Price: \$14.95 Producer: Basics and Beyond, Inc.

College Entrance Examination Preparation

Two-part series provides practice for SAT, PSAT and other standardized college entrance examinations. May be used in test, lesson or information mode. Time allowed is adjustable. **Available for:** APII + .48.D **Grades:** 9-12 **Price:** \$1450.00/set **Producer:** Borg-Warner Educational Systems.

Computer SAT

Uses software in conjunction with textbook to help build skills, speed and performance in taking SAT verbal and math sections. Measures improvement, provides drill and review, scores and times performance. Available for: APII/APII + .48.D Grades: 10-12 Price: \$69.95 Producer: Harcourt Brace Joyanovich, School Department.

Educational Series Software

Math Learning, Science Learning I and II, and Electrical Engineer Learning. For Hewlett Packard personal computers. Available for: * Grades: 7 + Price: \$10.00/ea. Producer: Hewlett Packard Co. Personal Computer Div.

Educational System Master Cartridge

Required to use Dorsett *Talk & Teach*™ cassette software. **Available for:** AT4/AT8.4.C* **Price:** \$79.00 **Producer:** Dorsett Educational Systems, Inc.

* = Contact producer or distributor

Elementary, My Dear Apple

Four programs cover spelling, arithmetic and problem-solving skills. Programs are: Lemonade, Darts, Supermath, Don't Fall. Available for: APII.48.D Grades: 6-10 Price: \$30.00 Producer: Apple Computer, Inc.

Elementary — Volume 4

Five-part science and math package explores estimation and basic operations in math, food chains, solar distance and constellations. Includes teacher's manual with objectives, suggested uses and worksheets. Available for: APII.32.D Grades: 2-6 Price: \$36.70 Producer: Minnesota Educational Computing Consortium (MECC).

Facts and Formulas

An information almanac. Includes: states and capitals, 135 foreign countries and their capitals, and many math formulae. Available for: RSI.C, RSIII.D Grades: 5-12 Price: \$24.95 Producer: Aquarius Publishers, Inc.

Following Directions Computer Game

Board-type game where player travels from one location on the map to another by giving directions or following directions. Two versions for Grades 2-5 and Grades 4-8. Available for: APII.48.D Grades: 2-8 Price: \$49.95 Producer: Learning Well™.

Galactic Guardian and Guillotine

Two games that supplement TYC's Individual Study Center. User can create own tapes or use prepared lessons. Available for: RSI/RSIII.16.C Price: \$12.95 Producer: TYC Software.

The Game Show

Uses animated color graphics to teach new vocabulary and new facts about the world. Includes an author system for adding teacher-made lessons and a back-up disk. **Available for:** APII/APII + .48.D **Grades:** 3 + **Price:** \$39.00 **Producer:** Computer-Advanced Ideas Inc.

Krell's College Board SAT Prep Series

Drill and practice keyed to SAT and PSAT exams. Available for: Most.16.C/D Grades: 11-12 Price: \$299.95 Producer: Krell Software Corp.

Library Skills

Tutorial in finding and using library resources. Students help a graphic character explore the library. Available for: APII + .32.D Grades: 5-8 Price: \$24.95 Producer: Micro Power & Light Co.

Library Skills Series

Eleven tutorials on library skills cover using card catalog, Dewey Decimal System, table of contents, title page, index, copyright notices, almanac reference tables and locating books on the shelf. Available for: PET.8.C, APII.32.D Grades: 2-7 Price: \$15.00 Producer: Right On Programs, Computeam, Inc.

Match Game

Concentration-like game generates boards with 4 to 20 boxes. Uses either exact or related matches (such as synonyms). Up to four players. User can create own games. Available for: PET.16.C, APII.32.D, RSI/RSIII.16.C Grades: K-8 Price: From \$19.95 Producer: Teaching Tools: Microcomputer Services.

Media Skills

Provides instruction and practice in using the card catalog. Includes simulation of card catalog use and lessons on types of catalog cards, call numbers, Dewey Decimal System, etc. Available for: APII+.48.D* Grades: 5-8 Price: * Producer: TIES: Total Information for Ed. Systems.

Memory Builder: Concentration

Player tests powers of concentration, memory and attention span by matching pairs of words hidden behind a grid of boxes on the screen. **Available for:** AT.16.D/C, APII.32.D **Grades:** 1 + **Price:** \$23.95 **Producer:** Program Design, Inc.

Microcosm I

Thirty programs for recreation, education and personal use. Includes: Country Guess, South Pole, Spelling Review, Transposition, Calories/Foods, Factorials and Metric Conversion. Available for: RSI.C, RSIII.D Grades: 3-12 Price: \$24.95 Producer: Basics and Beyond, Inc.

Microcosm II

Twenty user-tested programs for education, recreation and personal use. Includes: planet finder, algebraic factoring, prefix

study, state guess and electrical use. Available for: RSI.C, RSIII.D Grades: 3-12 Price: \$24.95 Producer: Basics and Beyond, Inc.

Microcosm III

Twenty programs, each of which uses sound. User can listen to or play music, improve typing and spelling, learn long division and multiplication, and play games. Available for: RSI.C, RSIII.D Grades: 3-12 Price: \$29.95 Producer: Basics and Beyond, Inc.

Microvert

Voice synthesizer software offers the blind access to microcomputers with CP/M operating systems. Converts all input and output into speech. Available for: Most.* Price: From \$250.00 Producer: Automated Functions, Inc.

Philosophy

Tutorial explores the history of philosophy from Plato to Futurism. Topics include: religious philosophy, modern philosophy, history of philosophy and ethics. Requires Dorsett's Educational System Master Cartridge. Available for: AT4/AT8.4.C* Grades: 9-12 Price: \$79.00 Producer: Dorsett Educational Systems, Inc.

Preparing for the SAT

Six cassettes: Analogies, Vocabulary Builder 1 and 2, Quantitative Comparisons, Number Series and Test-taking Strategies. Subject area programs also available separately on disk for Apple and ATARI computers. Available for: AT8.16.C Grades: 11-12 Price: \$125.00 Producer: Program Design, Inc.

Schoolhouse I

Ten programs on one disk cover skills including spelling, fractions, reading, Roman numerals and algebra. Available for: APII.48.D Grades: 1-5 Price: \$24.95 Producer: Compu-Tations Inc.

Shell Games

Four games offer various quizzes: The Animated Apple, Match Machine, Mr. Multiply and Professor True. User can also generate own quizzes. Available for: APII.48.D Grades: 6-12 Price: \$30.00 Producer: Apple Computer, Inc.

Signing

Teaches finger spelling for the hearing impaired. User can add phrases of up to 255 characters. Program displays letter-byletter pictures of hand positions as phrase is read back or vice versa. Available for: RSI/RSIII Grades: K-12 Price: \$19.95 Producer: En-Joy Computer Programs.

Snooper Troops Series

Interactive mysteries incorporating hi-res graphics and animation. Players try to determine criminal and motive by questioning suspects and searching houses for clues. **Available for:** Most.48.D **Grades:** 5 + **Price:** \$49.95 **Producer:** Spinnaker Software Corp.

SOFTSWAP

Approximately 300 public domain, teacherwritten and evaluated programs on 61 disks. One free disk in exchange for contribution if original program from donor or \$10.00 per disk. Available for: Most Price: * Producer: SOFTSWAP, San Mateo County Office of Education.

Thinking and Learning

Three programs on how we think, evaluate and reach reasonable conclusions. Includes teacher's guide. **Available for:** APII/APII+.32.D **Grades:** 8+ **Price:** \$45.00 **Producer:** Science Software Systems, Inc.

XL Learning Centers

Computer-managed learning centers in reading and math. Include instructional materials and Hoffman-produced software for the Apple II. Hardware not included. Furniture supplied on request at additional cost. Available for: APII + .* Price: * Producer: Hoffman Educational Systems.

Publications: A note about reading these listings

The books, magazines, and resources listed in the section that follows appear alphabetically by title. As in earlier sections, an asterisk in any of the information fields in a listing means that the information was unavailable to us when we went to press.

3 PUBLICATIONS

There's a popular misconception that computers will replace paper. But don't count on it. To get the most out of computers you need information—books, magazines, and instruction manuals.

Start with books. Before you buy or use a computer it's wise to read two or three books on the subject. Computers are not like any other electrical appliance the world has known. They handle the drudgery of calculation and other symbol manipulations beautifully. They provide a powerful medium for exploring abstract concepts. But they demand an initial investment in knowlege. The more you know, the more satisfaction you'll derive from using them.

Why is this? Computers are totally general-purpose information processing tools. They process numbers, words, graphics, and sound with equal facility. But they must be told what to do in elaborate detail. To control such versatile but literal servants you must have a rich but unambiguous language. And such a language takes time to develop and learn.

That's not to say that you have to be a genius to put computers to work in your school or classroom, however. Many valuable instructional and administrative software packages are easy to use. But such software is like a 10-day packaged tour of Europe—fine as long as you're willing to let someone else make the decisions. If you'd like to encourage your students to explore and think for themselves, you'll want to balance off-the-shelf software with materials that help teach computer literacy and programming.

What kinds of books are most valuable? Here's a rough-and-ready classification:

How computers work—overview These books put the technical terms and jargon in perspective. You'll find many fine books to choose from in this area. Since the computer field is evolving rapidly, look for books that are up-to-date and written in language with which you feel comfortable.

How computers work—specific Conceptually, all computers are alike, but specific systems differ in many details. Every popular microcomputer has spawned a rich literature devoted to tips, techniques, and technical sightseeing. When you start working with a specific computer system, you'll find a few books from this genre quite useful.

Programming tutorials Yes, you can teach yourself how to program, and there are many fine books available to help you do it. Don't try it without access to a computer, however. It's an exercise in futility.

Program anthologies It's quite useful to have one or two books around filled with programs that you or your students can key in and run on your computer Books in this category, and there are many, are organized by type of computer as well as type of application, such as games, business, utilities, and so on.

Advanced programming books These will become increasingly valuable as you and your students gain experience, but they're usually heavy going. They will help you understand how to solve a broad range of problems with your computer, however, if you're willing to wrestle with the technical presentation.

Reference books These include references on specific computers and computer languages. You might also include a good dictionary of computer terms in this category.

Computers and social issues In this group you'll find both fiction and nonfiction that covers a broad range of important social issues arising out of computers and their use, including privacy, job displacement, and crime.

Computers in education Computers have many applications in the educational setting. These books will help you learn from the experiences of others.

While books cover the big picture, magazines help you keep abreast of the rapidly changing technology. Literally scores of magazines, including those that focus on computers in education, are published. Magazines help you keep up with new hardware, software, and application ideas. They tell you who's doing what, how, where, and why.

The following listings present a wide range of books, magazines, and other information resources.

There's one category not included, however—instruction manuals. Instruction manuals come with your hardware and software. They have often been criticized for lack of clarity, but they're getting better. Hardware and software manufacturers are now publishing appropriate instruction manuals for nontechnical people—something that was generally not the case a short while ago. Before you buy specific hardware or software, look carefully at the manuals. Well-produced manuals usually indicate well-designed products.

Be sure to reserve a sturdy bookshelf in your classroom for books, magazines, and instruction manuals. And plan to include ample funds in your computing budget to keep it well stocked.

Books

Annotated BASIC, Vol. I and II

Publisher: Wayne Green Inc. Date: 1981 Price: \$10.95

Two volume set uses TRS-80 Level II programs to teach programming techniques.

Apple BASIC

Haskell, Richard

Publisher: Prentice-Hall Inc. Date: 1982

Price: \$12.95

Leads the student step-by-step through BASIC programming on the Apple II.

Apple Pascal Games

Hergert, Douglas, et al.

Publisher: Sybex Inc. Date: 1981 Price:

\$14.95

Collection of games provides program listings and explanations of program designs.

Apple Pascal: A Hands-on Approach

Luehrmann, Arthur, et al.

Publisher: McGraw-Hill Book Co., Webster/EDL/McGraw-Hill Div. **Date:**

1981 . Price: \$14.95

Fourteen hands-on sessions provide working knowledge of Pascal. Appropriate for either classroom use or self-study.

Are You Computer Literate?

Billings, Karen, et al.

Publisher: dilithium Press Date: 1979

Price: \$9.95

Self-instruction book on the capabilities, applications and implications of computers. Quizzes at beginning of chapters and final exam chart progress. Each chapter contains activities and information sources.

Arithmetic Teacher: Microcomputers

Hill, Jane M., editor

Publisher: National Council of Teachers of Mathematics **Date:** 1983 **Price:** \$3.50 Special *Arithmetic Teacher* issue focuses on microcomputers in elementary school mathematics. Includes articles on the microcomputer's capabilities and applications.

ATARI Games and Recreations

Kohl, Herb, et al.

Publisher: Reston Publishing Co. Date: 1982 Price: \$14.95

Basic introduction to the ATARI 400/800. Teaches programming to the novice through the use of games. Includes ready-to-run program listings.

BASIC: A Hands-on Method

Peckham, Herbert

Publisher: McGraw-Hill Book Co., Webster/EDL/McGraw-Hill Div. Date: 1978 . Price: \$11.16

Uses objectives, review tests, problems and examples to teach programming. Assumes background in beginning algebra. Instructor's manual available separately.

BASIC — A Unit for Secondary Schools

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date:

1981 Price: \$4.50

An introduction to BASIC designed to supplement secondary school courses in algebra, geometry, science, advanced mathematics and business.

BASIC Discoveries

Malone, Linda, et al.

Publisher: Creative Publications Date:

1981 Price: \$8.50

Activities for teaching BASIC. Reproducible one-page-per-activity format. For use with MicroSOFT BASIC.

Basic BASIC-English Dictionary for the Apple, PET and TRS-80

Noonan, Larry

Publisher: dilithium Press Date: 1982

Price: \$10.95

Dictionary of common BASIC commands, statements, operators and special keys. Eases conversion from one BASIC to another.

BASIC for Beginners

Bitter, Garry

Publisher: McGraw-Hill Book Co., Webster/EDL/McGraw-Hill Div. Date: 1978. Price: \$8.00

Requires no previous math or computer knowledge. Provides flowcharts for stepby-step problem solving. Includes selfchecking examples and exercises with sample programs.

The BASIC Handbook, 2d.ed.

Lien, David A.

Publisher: CompuSoft Publishing Date:

1981 **Price:** \$19.95

Dictionary of nearly 500 BASIC commands. Includes test programs, sample runs, variations in use and alternate spellings. Translates terms across computers.

The Beginner's Guide to Buying a Personal Computer

Mansfield, Richard, et al.

Publisher: COMPUTE! Publications, Small System Services, Inc. Date: 1982.

Price: \$3.95

Nontechnical handbook teaches the basics of evaluating and selecting a personal computer. Includes personal computer specifications charts and buyer's guide.

Best of Microcomputers in Education, Vols. I, II and III

Kantrowitz, Jonathan D., editor

Publisher: Queue, Inc. Date: 1981 Price: \$15.05

Software reviews and reports, news, articles and announcements from the first 16 issues of *Microcomputers in Education*.

Blue Book for the Apple Computer

Publisher: Visual Materials Inc. Date:

1981 Price: \$24.95

Describes hardware and software from over 450 producers. Over 2350 products in 57 categories. Some educational. Published annually.

Chemistry with a Computer

Cauchon, Paul

Publisher: Programs for Learning, Inc.

Date: 1980 Price: \$14.95

Contains 28 tutorial, simulation and problem-generating programs. Programs documented with sample runs and suggestions for classroom use.

Comprehensive Computer Book Reference and Guide

Benson, Terry, et al., editors

Publisher: Data Dynamics Technology

Date: 1982 Price: \$4.95

Lists 1,000 computer science books from 35 major publishers. Available through mail order. Cross-referenced by author, publisher, title, category and order number. Updated annually.

Computer Alphabet Book

Wall, Elizabeth S.

Publisher: Bayshore Books Date: 1979

Price: \$8.95

For young children. Associates letters with simple definitions of computer parts and terms.

Computer Awareness Book

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date: 1982 Price: \$2.90

3 PUBLICATIONS

books

An educational coloring book for Grades 1-4. Full-page diagrams and large type make for easy reading. TRS-80 computers pictured throughout.

Computer Calling, A Bit of Byte, The Basis of BASIC

Stauffer, Marge, et al.

Publisher: Educational Insights Date:

1982 Price: \$4.50 ea.

Three-book series of 48-page reproducible workbooks. Introduce and review computer literacy and BASIC programming. Not machine specific. Can be used without a computer.

Computer Carnival

Ramella, Richard

Publisher: Wayne Green Inc. Date: 1982

Price: \$10.95

Written for children, includes short programs set in large type, primarily games. Also includes a variety of education programs and graphics demonstrations.

Computer Dictionary

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date:

1979 Price: \$6.95

Dictionary of about 2500 words, phrases

and acronyms.

Computer Literacy: A Hands-on Approach

Luehrmann, Arthur, et al.

Publisher: McGraw-Hill Book Co., Webster/EDL/McGraw-Hill Div. Date:

1982 Price: \$17.97

Textbook for students Grades 7-12 covers top-down problem solving strategies, BA-SIC commands and historical, social and ethical issues related to computers. Workbooks, teacher's guide and disks which may be copied available separately.

Computer Literacy: Problem-Solving with Computers

Horn, Carin E., et al.

Publisher: Sterling Swift Publishing Co.

Price: \$7.95

For students with no computer background. Covers what computers are, how they work and how they are used. Also sold in set of 25 with teacher's manual.

Computer Programming for Kids and Other Beginners

Van Horn, Royal

Publisher: Sterling Swift Publishing Co.

Date: 1982 Price: \$9.95

An introduction for Grades 3-4. Includes practice exercises and glossary. Covers computer graphics. Three machine-specific editions. Also teacher's manual for \$4.95.

Computer Programming in the BASIC Language

Jacobs, Zeney L., et al.

Publisher: Allyn and Bacon, Inc. Date:

1983 Price: \$10.02

Step-by-step approach to computer programming. Stresses computer literacy with real-life applications. Access to computer not required. Requires eighth-grade math background.

Computers and Education

Poirot, James L.

Publisher: Sterling Swift Publishing Co.

Price: \$6.95

Covers computer history, educational applications and current trends. Provides a guide to selecting equipment and recommendations for setting up a computer lab.

Computer Tutor

Markle, Sandra

Publisher: The Learning Works, Inc.

Date: 1981 Price: \$4.95

Reproducible activity book with computer awareness activities, illustrations and explanations of computer concepts. Covers history and development, terms, uses, flow charts and computer careers.

Computers are Fun

Rice, Jean, et al.

Publisher: T. S. Denison and Co., Inc.

Date: 1981 Price: \$3.95

Computer literacy for four-to-nine year olds. Covers computer history, applications and hardware. Explains the concepts of flowcharts and programs.

Computers for Everybody

Willis, Jerry, et al.

Publisher: dilithium Press Date: 1981

Price: \$5.95

Covers what a beginner should know about computers.

Computers for People

Willis, Jerry, et al.

Publisher: dilithium Press Date: 1982

Price: \$7.95

General description of computer applications. Step-by-step buying guide.

Discovering Computers

Gledhill, V.X.

Publisher: SRA Science Research Associ-

ates, Inc. Date: 1981 Price: *

Introduction to programming, problem solving, computer applications and issues for high school and college students. Student text and instructor's guide.

DON'T! Or How To Care For Your Computer

Zaks, Rodnay

Publisher: Sybex Inc. Date: 1981 Price:

\$11.95

Gives specific information on how to avoid technical and other problems. Also includes trouble-shooting advice on peripherals and disks.

Education Software Directory for the Apple Computer

Publisher: Visual Materials Inc. Date:

1981 Price: \$9.95

Describes over 1000 programs in 24 subjects, elementary through adult. Published annually.

Elementary BASIC — Learning to Program Your Computer in BASIC with Sherlock Holmes

Ledgard, Henry, et al.

Publisher: Random House School Division

Date: 1982 Price: \$20.00

Step-by-step primer on programming in BASIC includes detailed examples and programs the readers can follow on their own computers.

Elementary Pascal — Learning to Program Your Computer in Pascal with Sherlock Holmes

Ledgard, Henry, et al.

Publisher: Random House School Division

Date: 1982 Price: \$20.00

Primer on programming in Pascal with examples and programs that readers can follow on their computers.

EPIE Report on Microcomputer Courseware

Komoski, P. Kenneth, editor

Publisher: EPIE Institute Date: 1981 Price: \$25.00

Detailed analysis of major microcomputer math packages.

Familiarizes readers with the fundamentals of FORTRAN. Designed to provide quick introduction.

Webster/EDL/McGraw-Hill Div. Date: 1982 . Price: * Self-study guide for beginners.

EPIE Special Report on Microcomputer Hardware

Komoski, P. Kenneth, editor

Publisher: EPIE Institute Date: 1982

Price: \$25.00

Analyzes hardware for the educational con-

sumer.

Evaluator's Guide for Microcomputer-Based Instructional **Packages**

Publisher: International Council for Computers in Education Date: 1982 Price:

Provides summary of MicroSIFT's software evaluation procedures. Includes forms and sample reviews.

Every Kid's First Book of Robots and Computers

Thornburg, David

Publisher: COMPUTE! Publications. Small System Services, Inc. Date: 1982.

Price: \$4.95

Introduces kids to robots and computers. Exercises use graphic computer languages such as ATARI PILOT, as well as Milton Bradley's Big Track and the book's own Turtle Tiles for kids who don't have computers.

Exploring the World of Computers

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date: 1982 Price: \$5.95

Book about computer applications, history, careers and how computers are used to solve problems. Introduces BASIC. Grades 4 and up.

Feed Me, I'm Your PET, and Looking Good with Your PET

Alexander, Carole

Publisher: Cow Bay Computing Date:

1978 Price: \$4.95 ea.

First and second workbooks for classes learning to program on the PET.

FORTRAN Programming

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date:

1980 Price: \$8.95

Fun & Games with the Computer

Sage, Edwin R.

Publisher: Entelek Date: 1973 Price:

\$10 95

Teaches BASIC in the context of wellknown games of chance and skill

Future Mind: The Microcomputer - New Medium, New Mental **Environment**

Lias, Edward J.

Publisher: Little, Brown and Company

Date: 1982 Price: \$16.95

Applies the theories of Marshall McLuhan to the use of computers. Discusses the microcomputer as a manipulator of various

Getting Down to BASIC

Hansen, Barbara

Publisher: K-12 MicroMedia, Inc. Date:

1982 Price: \$4.95

Workbook introduces students in Grades 6-9 to the fundamentals of programming. Differences among Apple, PET and TRS-80 are noted throughout.

Guide to Microcomputers

Frederick, Franz

Publisher: "Assn. for Educational Communications & Technology Date: 1980 Price: \$11.50

Discusses microcomputers, languages, operating systems. Emphasis on classroom and media center use.

Guidelines for Evaluating Computerized Instructional Materials

Kansky, Robert, et al.

Publisher: National Council of Teachers of Mathematics Date: 1981 . Price: \$3.75 Evaluation guide for users and creators of instructional software. Presents sample evaluation instruments and outlines procedures for their use.

Hands-on BASIC for the IBM **Personal Computer**

Peckham, Herbert

Publisher: McGraw-Hill Book Co.,

* = Contact producer or distributor

Hands-on BASIC with a PET

Peckham, Herbert

Publisher: McGraw-Hill Book Co., Webster/EDL/McGraw-Hill Div. Date:

1979 . Price: \$11.16

Teaches programming by having user devise programs to solve everyday problems. Includes examples, problems and test.

Hands On Computer Workbook

Poirot, James L., et al.

Publisher: Sterling Swift Publishing Co.

Date: 1979 Price: \$5.95

Workbook provides reinforcement for BASIC programming concepts taught in Sterling Swift's How to Program in BASIC software series. Four machine-specific editions

How to Buy a Personal Computer

Shrum, Carlton

Publisher: Alfred Publishing Co., Inc.

Date: 1981 Price: \$2.95

Practical introduction to microcomputer hardware and software. Includes chart comparing many popular systems. Updated quarterly.

The Illustrated Computer **Dictionary**

Armbruster, Franz, et al.

Publisher: ENRICH/OHAUS Date: 1982

Price: \$8.95

Illustrated dictionary of computer words and phrases for beginners. Includes addendum of background information and computer facts. Appropriate for Grades 4 and

Inside BASIC Games

Mateosian, Richard

Publisher: Sybex Inc. Date: 1981 Price: \$14.95

Uses games to teach beginning programmers interactive programming. Appendices give coding differences between PET, TRS-80 and Apple II.

Instant (Freeze-Dried Programming in) BASIC, 2nd. ed.

Brown, Jerald R.

Publisher: dilithium Press Date: 1982

3 PUBLICATIONS books

Price: \$12.95

Workbook for beginners. Includes end-of-chapter activities and graphics.

International Microcomputer Directory

Publisher: Sybex Inc. Date: 1981 Price: \$3.95

Includes 1600 definitions and acronyms. Appendices include: manufacturers' list and 250 common computer terms with translations into ten foreign languages.

Introduction to Computers and Computing

Rogers, Jean B.

Publisher: International Council for Computers in Education **Date:** 1981 . **Price:** \$2.50

Booklet for secondary school teachers planning to offer a computer science course.

Introduction to Computers in Education for Elementary and Middle School Teachers

Moursund, David

Publisher: International Council for Computers in Education **Date:** 1981 . **Price:** \$7.00

For self-instruction, in-service or preservice courses. Includes over 75 activities.

Introduction to TRS-80 Level II BASIC

Zabinski, Michael P.

Publisher: Radio Shack Date: 1980 Price: \$9.95

Textbook for teaching BASIC programming with sequential introduction of new concepts.

K-8 Math Cross Reference

Publisher: Radio Shack Price: \$4.95 Coordinates lessons in K-8 math courseware with chapters and pages of six popular math texts.

* = Contact producer or distributor

Layman's Guide to the Use of Computers

Charp, Sylvia, et al.

Publisher: Assn. for Educational Data Sys-

tems Date: 1982 Price: *

Acquaints the reader with uses of computers in education, especially in instruction.

Learning TRS-80 BASIC

Lien, David A.

Publisher: CompuSoft Publishing Date:

1982 Price: \$19.95

Step-by-step instructions for users of Radio Shack computers. Includes sample programs plus questions and answers with most chapters.

Logo Language: Learning Mathematics through Programming

Feurzeig, W., et al.

Publisher: Entelek Date: 1978 Price: \$20.00

Contains Logo teaching sequences in a variety of mathematical subjects and levels of difficulty.

MICRO on the Apple, Vol. I, II and III

Cavallari, Ford, editor

Publisher: Micro Ink, Inc. Date: 1981

Price: \$24.95/volume

Each volume contains over 30 applications for the Apple. Programs are on accompanying disk. Vol. I is for beginning to intermediate users. Vol. II for intermediate to advanced.

Microcomputer Coloring Book

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date:

1982 Price: \$2.90

An elementary coloring book that introduces computers. Apple II microcomputers are pictured throughout the book.

Microcomputer Navigation

Witt, Howard

Publisher: Entelek Date: 1982 Price: \$14.95

Contains three celestial navigation programs in BASIC for the TRS-80 pocket computer and the Apple.

Microcomputer Systems and Apple BASIC

Poirot, James L.

Publisher: Sterling Swift Publishing Co. **Price:** \$8.95

Nontechnical text covers computer development, computer languages and steps in flowcharting BASIC.

Microcomputers

Publisher: National Council of Teachers of Mathematics **Date:** 1981 **Price:** \$3.50 Special issue of *Mathematics Teacher* on computers in mathematics education. Covers selecting computers and starting high school or junior high school program. Includes a buying guide and a bibliography.

Microcomputers in Education

Naiman, Adeline

Publisher: TERC (Technical Education Research Centers) Date: 1982 . Price: \$5.00

Written to help novices plan and carry out educational computing programs. Includes reference section and a decision model for microcomputer purchase.

MicroMedia Handbook

CommuniTree Group,

Publisher: CommuniTree Group Date:

1982 **Price:** \$25.00

An overview and directory includes guide to on-line services, software, equipment and consultants plus bibliography and glossary.

Mindstorms

Papert, Seymour

Publisher: Basic Books Inc. Date: 1980

Price: \$6.95

Presents Papert's vision of education in the future. Discusses Logo.

My Computer Likes Me When I Speak in BASIC

Albrecht, Bob

Publisher: dilithium Press Date: 1972

Price: \$4.95

Introductory book on programming BA-SIC.

My Computer Picture Dictionary

Rice, Jean, et al.

Publisher: T. S. Denison and Co., Inc.

Date: 1981 Price: \$3.00

Beginning dictionary of computer terms for young students. Terms are listed, illustrated and used in an explanatory statement.

My Friend, The Computer

Rice, Jean

Publisher: T. S. Denison and Co., Inc.

Date: 1981 Price: \$4.95

An introduction to computers for Grades 4-7. Presents basic explanation of computers, time sharing, input, output, memory devices, flowcharts, BASIC programming.

My TRS-80 Likes Me

Albrecht, Bob, et al.

Publisher: Radio Shack Date: 1980 Price:

Series of programming exercises introduce students to elementary BASIC principles.

Number Patterns

Albrecht, Bob, et al.

Publisher: Radio Shack Price: \$2.50 Acquaints students with basics of number pattern theory through series of computer programming exercises.

1 Computer/30 Kids

Richardson, Kay F.

Publisher: Meka Publishing Co. Date:

1980 Price: \$4.98

Workbook for beginning programmers in Grades 5-9 offers practice in BASIC. Exercises do not require a computer.

Pascal: A Considerate Approach

Price, David

Publisher: Prentice-Hall Inc. Date: 1982

Price: \$9.95

Presents a complete introduction to programming Pascal. Neither prior programming experience nor advanced mathematical training assumed.

Peanut Butter and Jelly Guide to Computers

Willis, Jerry

Publisher: dilithium Press Date: 1978 Price: \$9.95

Consumer's guide to and tutorial on personal computing.

PET BASIC

Zamora, Ramon, et al.

Publisher: Reston Publishing Co. Date:

1981 Price: \$14.95

Step-by-step guide to programming the PET. Covers graphics. Includes chapter summaries and exercises.

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3 PUBLICATIONS

books

PET Games and Recreations

Oglesby, Mac, et al.

Publisher: Reston Publishing Co. Date:

1981 Price: \$12.95

Entertainment and education games ar-

ranged in levels of difficulty.

PET/CBM BASIC

Haskell, Richard

Publisher: Prentice-Hall Inc. Date: 1982

Price: \$12.95

Text teaching BASIC programming is suitable for introductory high school programming courses. Can also be used for

self-study.

Picture This Too!: An Introduction to Computer Graphics for Kids of all Ages

Thornburg, David D.

Publisher: Addison-Wesley Publishing

Co. Date: 1982 Price: \$14.95

Written for the Apple II microcomputer (using SuperPILOT). Explains elementary programming and the use of Turtle geome-

try to children and adults.

Picture This!: An Introduction to Computer Graphics for Kids of all Ages

Thornburg, David D.

Publisher: Addison-Wesley Publishing

Co. Date: 1982 Price: \$14.95

Written for the ATARI (using ATARI PILOT Turtle Geometry). Teaches kids and adults how to solve problems, draw pictures, program and invent games on a personal computer.

A Planning Guide to Successful Computer Instruction

Peters, G. David, et al.

Publisher: Electronic Courseware Systems, Inc. **Date:** 1981 **Price:** \$19.95 Covers selection and evaluation criteria for

hardware and software, developing and managing computer centers, and sources of hardware and software.

Pocket Computer Primer

Librach, Hank

Publisher: Micro Text Publications Inc.

Date: 1982 Price: \$9.95

Introduction to computer literacy using the new, low-cost Sharp and TRS-80 pocket computers. Covers computer science, ecology, math, geography, programming. Accompanying software available separately.

The Pocket Guide of Computer Technology

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date:

1982 Price: \$1.25

Glossary of 198 common computer terms. For students in junior high or high school.

Practical Guide to Computers in Education

Coburn, Peter, et al.

Publisher: Addison-Wesley Publishing

Co. Date: 1982 Price: \$9.95

Covers practical applications of computers at all educational levels and in all subjects for teachers, administrators and parents.

Precollege Computer Literacy: A Personal Computing Approach

Moursund, David

Publisher: International Council for Computers in Education **Date:** 1981 . **Price:** \$1.50

Guide to computer literacy in elementary and secondary education.

Problem Solving with the Computer

Sage, Edwin R.

Publisher: Entelek Date: 1968 Price:

\$10.95

BASIC text. Includes 40 graded problems that deal with topics found in traditional high school mathematics courses.

Programming in BASIC

Cummins, Jerry, et al.

Publisher: Charles E. Merrill Publishing

Co. Date: 1982 Price: \$8.70

Basal text for high school students with first-year algebra background. Provides instruction in BASIC with applications for programming.

Proposal Writing Guide

Bell, Norman T., et al.

Publisher: Radio Shack **Price:** \$9.95 Step-by-step approach to writing successful

funding proposals.

The Resource Directory of Hardware and Supplies for the Apple Computer

Publisher: Visual Materials Inc. Date:

1981 Price: \$9.95

Describes peripherals, accessories, supplies, books, user organizations. Costs and vendor information included. Published annually.

School Administrator's Introduction to Instructional Use of Computers

Moursund, David

Publisher: International Council for Computers in Education **Date:** 1982 **Price:** \$2.50

Booklet for administrators or school board members on computers and their effect on the curriculum.

Sources for Courses

Publisher: TALMIS, Inc. Educational Programming Systems **Date:** 1982 **Price:** \$9.95

Software reference guide. Over 900 programs, K-college, listed by title, topic, style, grade level, running time, publisher, price and equipment needs. Also references software reviews. Updated annually.

Start with BASIC on the Commodore VIC-20

Monro, Don

Publisher: Reston Publishing Co. Date:

1982 Price: \$9.95

Guide to programming the VIC-20. Covers graphics and includes exercises and step-by-step instructions.

Starting FORTH

Brodie, Leo

Publisher: Mountain View Press, Inc.

Date: 1981 Price: \$16.00

A FORTH language manual with examples and problems.

Swift's 1982 Educational Software Directory

Publisher: Sterling Swift Publishing Co.

Date: 1982 Price: \$11.95

Lists all Apple educational software. Indexed by publisher.

* = Contact producer or distributor

Teacher's Guide to Computers in the Elementary School

Moursund, David

Publisher: International Council for Computers in Education **Date:** 1980 . **Price:** \$2.50

Booklet for grade-school teachers on instructional uses of computers.

Teacher's PET

Alexander, Carole

Publisher: Cow Bay Computing Date:

1978 Price: \$4.00

Lesson plans, quizzes and activities for workbooks: Feed Me, I'm Your PET and Looking Good with Your PET.

Teaching BASIC Bit by Bit

Friedman, Batya, et al., editors

Publisher: Math and Computer Education Project Date: 1980 Price: \$7.50

Contains lessons and activities to help teachers introduce computers and programming to students 11 years old to adult. Examples are for Apple and PET BASIC, but can be adapted for any system.

32 BASIC Programs Series

Rugg, Tom, et al.

Publisher: dilithium Press Date: 1979

Price: \$19.95 ea.

Three volumes of ready-to-run programs. One each for Apple, TRS-80 and PET computers. Includes educational programs.

3-D Computer Graphics: Perspective Drawing with the Computer

Willis, Mark A.

Publisher: Entelek Date: 1982 Price: \$14.95

Shows how to design programs to draw perspective, shadows and three-dimensional pictures using stereo pairs displayed on the monitor. Includes a program for the Apple II. Program is also available on disk.

TRS-80 Color Computer Graphics

Inman, Don, et al.

Publisher: Reston Publishing Co. **Date:** 1982 **Price:** \$14.95

Step-by-step introduction to graphics for the TRS-80 Color Computer. Provides application programs and subroutines. Each chapter ends with summary and practice exercises.

TRS-80 Educational Software Sourcebook

Publisher: Radio Shack Date: 1982 Price: \$4.95

Educational software directory.

TRS-80 Microcomputer Information Handbook for Educators

Publisher: Radio Shack **Price:** \$2.50 Provides basic information on applications of TRS-80 computers to classroom instruction

Understanding Artificial Intelligence

Gloess, Paul Y.

Publisher: Alfred Publishing Co., Inc.

Date: 1981 Price: \$2.95

Surveys current developments and applications of artificial intelligence. Nontechnical.

Understanding BASIC

Peddicord, Richard G.

Publisher: Alfred Publishing Co., Inc.

Date: 1981 Price: \$2.95

Teaches programming. Emphasizes fundamental programming concepts and covers most features common to all popular versions of BASIC.

Understanding COBOL

Peddicord, Richard G.

Publisher: Alfred Publishing Co., Inc.

Date: 1981 Price: \$2.95

Introduction for beginning programmers that highlights key concepts and structures while teaching simple programming.

Publisher: Alfred Publishing Co., Inc.

Acquaints student with mathematical and

scientific applications of FORTRAN and

covers the essential features of the lan-

Understanding FORTRAN

Ludwig, Herbert R.

guage.

Date: 1981 Price: \$2.95

Your First Computer

Zaks, Rodnay

Publisher: Sybex Inc. **Date:** 1980 **Price:** \$8.95

Beginner's guide to small computers. Provides information on how to select, buy and use a personal computer and accompanying software.

Understanding Pascal

Ledin, George, Jr.

Publisher: Alfred Publishing Co., Inc.

Date: 1981 Price: \$2.95

Introduction for beginners covers Pascal programming structures and techniques.

Using Computers in Mathematics

Elgarten, G., et al.

Publisher: Addison-Wesley Publishing

Co. Date: 1983 Price: \$18.60

Textbook introduces computer concepts and mathematics applications. For introductory computer science classes.

VanLove's Educator's Microcomputer Handbook and Software Directory

VanDiver, Gerald, et al.

Publisher: Vital Information, Inc. Date:

1982 Price: \$19.95

Contains articles about funding, software and software evaluation. Subject and grade level indexes.

VanLove's 1983 Apple II/Apple III Software Directory, Vol.2

VanDiver, Gerald, et al.

What Computers Can Do

Publisher: Vital Information, Inc. Date:

1982 Price: \$19.95

Spencer, Donald D.

1982 Price: \$12.95

Directory of Apple software and peripherals. Includes education and school administration sections.

Publisher: Camelot Publishing Co. Date:

Describes in simple language how com-

puters are used in medicine, law enforce-

ment, education, business, fine arts, facto-

ries, space, government, newspapers, su-

permarkets, department stores and sports.

Magazines

AEDS Journal

Spuck, Dennis, editor

Publisher: Assn. for Educational Data Systems Date: 1967, quarterly Price: \$25.00 Papers on educational applications of computers, research reports, book reviews, historical reviews and bibliographies.

AEDS Monitor

King, D. Thomas, editor

Publisher: Assn. for Educational Data Systems Date: 1965, quarterly Price: \$15.00 Covers current developments in educational computing: applications, professional activities, news of state and federal agencies.

Apple Education News

Polin, Glen, editor

Publisher: Apple Computer, Inc. Date:

1980, 3/yr. Price: Free

News of educational applications of Apple products, plus announcements of new software and books.

APX (ATARI Program Exchange)

Kelcy, Ann, editor

Publisher: Publisher: ATARI, Inc., Home Computer Division Date: n.a., quarterly

Price: \$2.00/issue

Catalogue of user-written programs for ATARI. Includes software description, prices and ordering information.

Arithmetic Teacher

Hill, Jane, editor

Publisher: National Council of Teachers of Mathematics Date: 1954, 9/yr. Price: \$30.00

Covers elementary school math instruction. Includes reviews of microcomputer software and application articles.

ATARI Special Additions

Bowman, Sally, editor

Publisher: ATARI, Inc., Home Computer Division Date: n.a., quarterly Price: \$3.00/issue

Catalogue of computer products. Includes peripherals, publications and some software.

Buss: The Independent Newsletter of Heath Company Computers

Floto, Charles, editor

Publisher: Buss Date: 1977, 16/yr. Price: \$26.00

Covers hardware/software of interest to Heathkit and Zenith Data Systems users. Also reports industry events, new products and readers' experiences with their systems.

Byte Magazine

Morgan, Chris, editor

Publisher: Byte Publications, Inc. Date:

1975, monthly Price: \$19.00

Technical magazine in the personal computer field. Contains articles for both novices and seasoned users.

Classroom Computer News

Olds, Henry F., editor

Publisher: Intentional Educations, Inc.

Date: 1980, 6/yr. Price: \$16.00 Magazine about educational computing for

teachers and administrators.

COMPUTE! Magazine

Lock, Robert, editor

Publisher: COMPUTE! Publications, Small System Services, Inc. Date: 1980,

monthly Price: \$20.00

Magazine for ATARI, Apple, PET and other 6502 computers. Provides monthly coverage of education with emphasis on applications.

Computers in Education

Studebaker, Karen, editor

Publisher: Studebaker Technology Date:

1981, monthly Price: \$18.00

Newsletter that covers all aspects of selection, acquisition and use of computers in schools. Includes information on computers, computer software, support materials, research, funding sources.

The Computing Teacher

Ricketts, Dick, editor

Publisher: International Council for Computers in Education Date: 1979, 9/yr.

Price: \$14.50

Covers instructional computing from preschool through high school. Articles about computers, teacher education and the impact of computers on the curriculum.

* = Contact producer or distributor

Courseware Report Card

Falstein, Mark, editor

Publisher: Educational Insights Date:

1982, 5/yr. Price: \$49.50

Educational software evaluations. In-depth analysis plus capsule summary of reviewed programs. Separate editions for elementary and secondary schools.

Creative Computing Magazine

Ahl, David H., editor

Publisher: Ahl Computing Date: 1974,

monthly Price: \$24.97

General computing magazine featuring applications and reviews. Some features on educational computing.

Dr. Dobbs Journal

Ouverson, Marlin, editor

Publisher: Peoples Computer Company Date: 1976, monthly Price: \$25.00 General computing magazine for technically sophisticated readers.

Educational Computer Magazine

Hiraki, Joan, editor

Publisher: Educational Computer Magazine Date: 1981, bimonthly Price: \$15.00 Magazine for specialist, educator and administrator. Covers computer field, including special education and funding.

Educational Technology Magazine

Lipsitz, Lawrence, editor

Publisher: Educational Technology Publications, Inc. Date: 1961, monthly Price:

Covers all areas of educational media and technology: professional articles, software reviews, columns, new products, research reports.

80 Microcomputing

Maloney, Eric, editor

Publisher: Wayne Green Inc. Date: 1980,

monthly Price: \$24.97

Magazine about TRS-80 computers covers education, business, home.

Electronic Education

Lobello, Sharon T., editor

Publisher: Electronic Communications Inc. Date: 1981, 9/yr. Price: \$15.00 Nontechnical magazine about technology that effects education. For teachers and administrators. Regularly offers special pull-outs.

Electronic Learning Magazine

Roberts, Jack, editor

Publisher: Scholastic, Inc. Date: 1981,

monthly Price: \$19.00

Nontechnical magazine provides educators with practical information about technological aids. Covers videodiscs, video cassette recorders, calculators and any computer-based technology.

ETC: Educational Technology and Communication

Bonnet, Kendra, editor

Publisher: Far West Laboratory Date:

1982, monthly Price: \$36.00

Newsletter principally for school board members and school administrators. Includes case studies, analyses of issues concerning educational technology, how-to advice and resource information.

Hands On!

Tinker, Robert F., editor

Publisher: TERC (Technical Education Research Centers) Date: 1978, 3/yr.

Price: Free

Newsletter features articles on educational computing, news of TERC workshops, publications and events, software reviews and general educational computing news.

InfoWorld — The Newsweekly for Microcomputer Users

Canon, Maggie, editor

Publisher: InfoWorld Date: 1980, weekly

Price: \$25.00

A consumer newsweekly for the microcomputer user. Features focus on new technologies, hardware and software reviews and new products. Covers education.

Innovator: Intel's News Magazine for the Academic Community

Lapham, Steven A., editor

Publisher: Intel Corp. Educational Products Group Date: n.a., 3/yr. . Price: Free News and product information on microcomputers and related technology for educators.

Instructor Magazine

Landsmann, Leanna, editor

Publisher: Instructor Pubs., Inc., Date: 1981, 9/yr. Price: \$18.00. Classroom-use magazine for K-8 teachers; provides practical information about getting started with computers; product reviews and a monthly column "Computer Corner" with news for classroom computer users.

Journal of Computers in **Mathematics and Science Teaching**

Marks, Gary H., editor

Publisher: Assn. for Computers in Mathematics and Science Teaching Date: 1981, quarterly . Price: \$15.00

Covers applications in and research on teaching math and science with computers. Includes software and program listings, book reviews, bibliographies.

The Journal of Courseware Review

Stauffer, Carolyn M., editor

Publisher: Apple Education Foundation Date: 1981, quarterly Price: \$5.95/issue Critical reviews of commercially available software for Apple computers.

Journal of Data Education

Brooks, Lloyd, editor

Publisher: Society of Data Educators Date: 1960, quarterly **Price**: \$20.00 Journal of the Society of Data Educators.

M.A.L.A.:

Micro-Assisted-Learning-Aids

Publisher: Comm*Data Systems, Inc.

Date: n.a., 8/yr. Price: \$60.00

Each issue contains four educational programs on cassette in a variety of elementary school subjects. Descriptive instruction sheets come with each issue.

Mathematics Teacher

Tunis, Harry B. editor

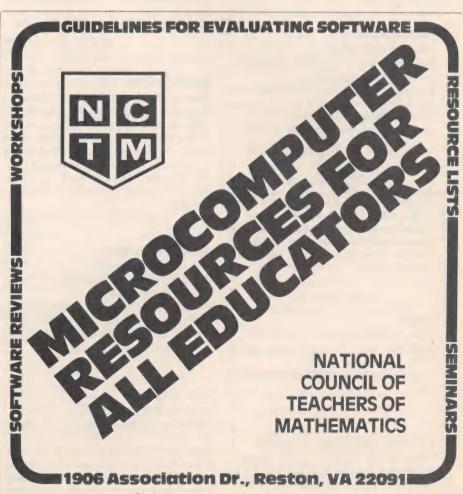
Publisher: National Council of Teachers of Mathematics Date: 1908, 9/yr. . Price:

Emphasizes practical ways of helping teachers in secondary schools, two-year colleges and teacher-education institutions teach mathematics effectively. Contains articles on computers.

MICRO, The 6502/6809 Journal

Tripp, Bob, editor

Publisher: Micro Ink, Inc. Date: 1977,



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3 PUBLICATIONS

magazines

monthly Price: \$24.00

Monthly journal for users of 6502 and 6809 microprocessor-based computers.

Microcomputer Index

Ward, Joseph, editor

Publisher: Microcomputer Information Services, Inc. Date: 1980, quarterly Price:

Guide to articles from 30 microcomputer publications. Index is also available on-line through DIALOG (Lockheed Information Systems).

Microcomputers in Education

Kantrowitz, Jonathan D., editor

Publisher: Queue, Inc. Date: 1980,

monthly Price: \$33.00

Educational software newsletter. Subscription includes 10 percent discount on software purchased from Queue, Inc.

Microcomputing

Green, Wayne, editor

Publisher: Wayne Green Inc. Date: 1977,

monthly Price: \$24.97

Programs, hardware/software modifications and reviews of major

microcomputer systems.

Mini-Micro Systems

Curran, Larry, editor

Publisher: Mini-Micro Systems Date:

1976, monthly Price: \$35.00

Trade magazine for computer professionals, including educators, who buy or use mini- or microcomputers. Free to qualified subscribers.

Nibble

Harvey, Mike, editor

Publisher: Nibble-Micro-Sparc, Inc. Date:

1980, 8/yr. Price: \$19.95

Magazine of Apple programs and informa-

tion.

Personal Computing Magazine

Gabel, David, editor

Publisher: Hayden Book Company, Inc. **Date:** 1977, monthly **Price:** \$11.97

Nontechnical personal computing magazine. Includes monthly articles about educational, leisure-time, managerial and professional computing.

Popular Computing

Morgan, Chris, editor

Publisher: Byte Publications, Inc. Date:

1981, monthly Price: \$12.97

Consumer magazine about small computers for business, home and education.

School CourseWare Journal

Isaacson, Dan, editor

Publisher: School & Home CourseWare, Inc. Date: 1980, 5/yr. Price: \$90.00/disk Each issue contains two complete programs on cassette or disk with full documentation in magazine format. Available for Apple II, TRS-80 or Commodore PET. ATARI version due soon.

School Microware Reviews

Haven, Bob, editor

Publisher: Dresden Associates Date:

1981, 2/yr. Price: \$20.00/issue

Each edition reviews 50 educational products for major computers. Includes index of reviews in other publications.

Softalk/Softline

Tommervik, Margot Comstock, editor **Publisher:** Softalk Publishing, Inc. **Date:** 1980, monthly **Price:** \$24.00

News and features magazine, free to Apple owners. Reviews software, profiles people in the industry, runs programming tutorials. Regular column on Apples in education and issues in computer-assisted learning.

Softside Magazine

Kottwitz, Randal, editor

Publisher: Softside Publications Date:

1978, monthly Price: \$24.00

Publishes three or four programs monthly for Apple, ATARI and TRS-80 computers. Some educational. Programs available on cassette or disk at extra charge.

Sync Magazine

Grosjean, Paul, editor

Publisher: Sinclair Research Ltd. **Date:** 1980, monthly **Price:** \$30.00

Magazine for Sinclair computer users.

* = Contact producer or distributor

Syntax Newsletter

Zevnik, Anne, editor

Publisher: Sinclair Research Ltd. Date:

1980, monthly Price: \$29.00

Offers programs and advice to and from Sinclair computer users.

Teaching Computer Programming

Nansen, Craig, editor

Publisher: Teaching Computer Programming Date: 1980, 9/yr. Price: \$8.00 Newsletter for teachers of computer programming.

T.H.E. Journal

Charp, Sylvia, editor

Publisher: T.H.E. Journal, Information Synergy, Inc. **Date:** 1973, 8/yr. **Price:** \$15.00

Magazine covers technical products and issues at all levels of education and in industrial training and vocational education.

TRS-80 Microcomputer News

Publisher: Radio Shack Date: 1979,

monthly Price: \$12.00

Newsletter for TRS-80 owners. Includes articles, product information, programs. Twelve-month subscription free to purchasers of new TRS-80 systems.

Turtle Talk

Publisher: Harvest Publishing Date:

1982, bimonthly Price: \$12.00

Logo newsletter covers applications, Logo in special education, software and book reviews, Logo news and calendar.

WINDOW

Olds, Henry F., editor

Publisher: Window, Inc. Date: 1982, 5/yr.

Price: \$99.95

Programs about software and programming published on disk for Apple II owners.

Resources

At Home with the Computer: What Can It Do for You?

Publisher: The Center for the Humanities,

Inc. Price: From \$149.50

Introduces an interactive computer programmed to talk, obey spoken commands and do household tasks. Acquaints students

with how computers work and how they are used. Filmstrip, slide set and videocassette versions. Grades 7-12.

BASIC: An Introduction to **Computer Programming**

Publisher: The Center for the Humanities,

Inc. Price: From \$149.50

Introduces BASIC vocabulary and simple programming techniques. Covers analyzing the problem, flow charting and writing program statements. Filmstrip, slide and videocassette versions available. Grades 7-

Bibliographic Retrieval Services

Publisher: BRS, Bibliographic Retrieval Services Price: 3

Various on-line educational data bases including ERIC, Exceptional Childhood Abstracts, SPIF (about educational software), Resources in Vocational Education and Bilingual Education Bibliographic Ab-

Cardboard Computer Literacy Kit

VanDiver, Gerald, et al.

Publisher: Vital Information, Inc. Date: 1982 Price: *

Two posters with packet of lessons about the functions of computer components. Nontechnical vocabulary. Includes quizzes and tests.

Careers in Computer Science and Service

Publisher: The Center for the Humanities. Inc. Price: From \$149.50

Looks at jobs in computer hardware, software and operations fields. Explores the education, training, experience and aptitudes required for a variety of jobs. Filmstrip, slide and videocassette versions available. Grades 7-12.

Computer Hardware: What It Is and How It Works

Publisher: The Center for the Humanities, Inc. Price: From \$149.50

Filmstrip or sound/slide set demonstrates information processing in a computer and examines each step in a computer's operation. Includes teacher's guide. Grades 7-12.

The Computer is Here

Falstein, Mark

Publisher: Educational Insights Price: \$6.95

Resource box. Fifty-four four-by-six cards contain computer literacy activities ranging from computer applications to flow charting. Includes several short BASIC programs.

Computer Literacy Instructional

Publisher: Science Software Systems, Inc. Price: \$145.00/set

Three audiovisual sets: BASIC Programming, Computer Basics and Micro-Computing. Each includes six filmstrips. six audio cassettes and a teacher's guide.

Computer Poster Book

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date: 1982 Price: \$14.95

Sixty-one posters designed for school bulletin boards. Cover computers, computer applications, problem-solving techniques and computer history.

Computer Software: What It Is and How It Works

Publisher: The Center for the Humanities,

Inc. Price: From \$149.50

Filmstrip or sound/slide set explains how programs enable a computer to process data. Illustrates decision-making loops and subroutines. Describes how software controls computer operations and helps people communicate with the machines.

Computers: From Pebbles to **Programs**

Publisher: Guidance Associates, Inc. Price: From \$119.50

Filmstrip, slide set or videocassette traces the history of calculating machines and computer technology. Introduces computer terminology and examines some uses of computers. Includes teacher's guide. Grades 7-12.

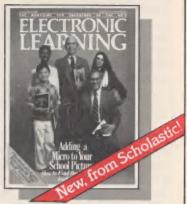
Computers: The Friendly Invasion

Publisher: Walt Disney Educational Media Co. Price: \$419.00

A 16-mm film that explores unusual computer applications in areas such as the arts, sports, motion pictures, architecture, design. Grades 5-8.

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3 PUBLICATIONS resources

Computers: The Inside Story

Publisher: Churchill Films Date: 1982 Price:

Twenty-minute film illustrates how computers work. Also available in all videotape formats.

Computers: Tools for People

Publisher: Churchill Films Date: 1982 Price: *

Twenty-minute film gives basic information on computer applications. Also available in all videotape formats.

Don't Bother Me, I'm Learning -**Adventures in Computer Education**

Publisher: McGraw-Hill Book Co., CRM/ McGraw-Hill Div. Date: 1981 Price: From \$305.00

A 16-mm film or videocassette demonstrates the uses of computers in the classroom. Features interviews with students, teachers and parents.

Educator's Information Hotline

Publisher: Vital Information, Inc. Price: Free

Toll-free number — 1-800-255-5119 — for answers to questions about software.

Famous People of Computing

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date: 1982 Price: \$12.95

A set of 37 posters of computer pioneers, each with a brief biography. Appropriate for bulletin boards.

I Speak BASIC Series

Jones, Aubrey

Publisher: Hayden Book Company, Inc.

Date: 1982 Price: \$156.25

Field-tested computer literacy course requiring no computer experience on the teacher's part. Classroom set contains teacher's manual, 20 student texts and one exam set. Three machine-specific sets: Apple, TRS-80 and PET.

* = Contact producer or distributor

Input/Output

Publisher: Educational Insights Price: \$12.95

Board game that parallels the structure of a computer program. Players accumulate "line cards" that form complete programs which can be entered and run on TRS-80 microcomputer. For 2-4 players.

Learning About Computers

Engelmeyer, William J.

Publisher: Aquarius Publishers, Inc.

Price: \$129.95

Classroom kit contains 10 self-directing cassette lessons, 300 response booklets (30 for each lesson), 10 reproducible post-tests, 10 lesson guides and one comprehensive kit guide. Appropriate for Grades 5 up.

Microcomputers at School

Publisher: Educational Development

Corp. Price: \$795.00

Three-part videotape series presents educators and parents with information about educational uses of computers. Requires videocassette player. Includes viewer's guide and a collection of resource materials.

Show and Tell

Publisher: Sterling Swift Publishing Co.

Price: \$59.95

Contains examples of real computer equipment, including a floppy disk, integrated circuit and magnetic tape. Traces computer technology from the abacus to the Apple.

The Source

Publisher: Source Telecomputing Corp.

Price: *

Telecommunications network offers access to nearly 1200 programs and data bases. Accepts institutional and individual mem-

Tymnet

Publisher: Tymshare, Inc. Price: * Data communications network that can be accessed via telephone from 300 cities nationwide and 35 foreign countries.

Visual Masters for Teaching About Computers

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date:

1982 Price: \$9.95

Sixty duplicating masters to teach and test computing basics.

Visual Masters for Teaching BASIC Programming

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date:

1982 Price: \$9.95

Contains 60 masters that teach BASIC programming.

Visual Masters for Teaching **FORTRAN Programming**

Spencer, Donald D.

Publisher: Camelot Publishing Co. Date:

1978 Price: \$9.95

Contains 60 masters to help teach FOR-TRAN. Set follows the sequence used in many FORTRAN programming texts.



The above are just a few of the many publications available to educators who want to know more about computers.

Speak Your Language ...and Your Students'

■ DEPENDABLE ■ PRACTICAL ■ CLASSROOM-TESTED



COMPUTER LITERACY:

A HANDS-ON APPROACH, Grades 6-12

by Arthur Luehrmann and Herbert Peckham

The first classroom textbook approach to computer literacy: students

- learn to write, load, and run their own programs
- learn the grammar in BASIC; write with standard control structure; use top-down problem solving strategies
- become aware of historical, social, and ethical issues related to computer use

Hardware-specific textbook, detailed teacher's manual, workbook, copyable learner diskette. Choice of edition: Apple II or TRS-80

THE SEARCH SERIES

by Tom Snyder, Grades 4-8

Simulations make science and social studies facts and concepts come alive as students sail to a new world, search for oil, run a power company, move a civilization or manage an archeological dig. Each of the five Search packages include software, teacher's manual and 20 student workbooks. Geography Search; Geology Search; Community Search; Archeology Search; Energy Search. Apple II+ disks (48K, 3.3 DOS); TRS-80 Model III disks (32K)

INTRODUCTION TO **MICROCOMPUTERS**

by John Haugo, Grades 3-6 Students use games to learn computer parts, simple terminology and keyboarding skills. Software, teacher's notes, reproducible student ac-

tivity sheets. Apple II + disks (32K, 3.3 DOS); TRS-80 Model III disks (32K); PET cassettes

(8K, 2.0 or 4.0 ROM)

MATH DRILL AND PRACTICE SERIES

by John Haugo, Grades 4-6

Three important areas of drill and practice made fun with games and graphics. All include software and teacher's resource guide with reproducible activity sheets. Software available listed

- Math Skill Games: Twelve program package using words and graphics to increase speed and develop accuracy in addition, subtraction, multiplication and division.
- Math Word Games: Six program package builds in solving math word problems.
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In782

As you may have surmised from the tips on hardware and software selection elsewhere in this directory, you'll wish you had a computer to process all the information you'll need in order to decide which computers to buy with which options and add-ons to run which software. The wide selection and remarkable modularity of small computers are wonderful but you must be knowledgeable before you fill out a purchase order. All the components in your computer system need to fit together like pieces of a jigsaw puzzle. The disk drives and printers need to talk to the computers; the software must fit the disk drives and run properly with the rest of the system. If you buy a conventional system from one manufacturer you'll have little problem. But if you want special capabilities such as speech synthesis or special graphics features, you may need to buy from more than one maker, and you'll find a frustrating lack of standards in the industry. Here's where the ability to read the fine print on the spec sheets comes in handy.

Then there's the matter of price. The store down the street quotes you one figure and the mail-order dealer gives you another. The educational computing distributor offers a complete package; if you mix and match from several sources you may come out with a better price.

This leads to a basic question—with whom should you do business when you buy computer hardware or software? The manufacturers? The mail-order discount houses? The educational distributors or your local computer store? Let's look at the options.

Manufacturers: If you're buying a large number of computers—a purchase for the district, for instance, it's well worthwhile to prepare a request for bids that includes a detailed specification of your needs; then send it to the national accounts sales office of each of the major manufacturers. If you're talking large numbers—several hundred computers, for example—you can often negotiate favorable prices on hardware and software and get extras such as teacher training and long-term maintenance included in the package. Because you'll get the best response from manufacturers who are aggressively trying to advance their competitive position in the education market, this approach works best if you do your homework on products and prices and do not have a strong preference for a particular make of computer.

Mail order: Unless your school is in the north

woods, the only reason to consider buying through a mail-order house is lower prices. You'll find many mail-order outfits advertising in the computer magazines. Their advertised prices are often 30 percent or more off list. But you would consider buying through a mail-order firm only if you know exactly what you want, will not need help installing or using it, and have a dependable arrangement for service. Carefully check the reputation of the mail-order house for reliability before you buy. When you place an order through the mail, avoid paying cash in advance and be willing to cancel if you don't receive prompt delivery.

Educational distributors: The educational distributor who offers computer products will speak your language, whereas many other people in the computer distribution chain won't. The educational dealer will stock hardware and software that is specifically selected to meet the needs of schools, will keep up with which districts are doing what with computers in the area, and often offer inservice training.

Sales personnel will be helpful with information and suggestions before you buy and attentive to problems after. You'll usually pay full list price for this service, but to many educators it's worth it. The major disadvantage of buying from an educational distributor shows up if you are geographically distant from its nearest office. It's hard to get good service from a firm that's 100 or more miles away.

Computer stores: Computer stores and other retail computer outfits are nearly as common as pet stores. Some cater to hobbyists and some to business. Some are little more than counters at the back of an appliance store; some are slick, interior-designed national franchises.

Buying from a local computer store has one major advantage. Because, as an educator, you are an influential and visible person in your community, the management of the local computer store has a vested interest in keeping you happy. This is particularly true in smaller communities. Prices will generally be higher in a computer store than they are elsewhere, but so is the willingness to provide information and service. Such willingness, however, depends upon the quality of the local management.

The bottom line is this: If you know what you're doing, shop widely and drive a hard bargain on price. If not, buy from someone local and look for the best support and service.

Producers and Publishers

Addison-Wesley Publishing Co.★ Jacob Way Reading, MA 01867 617/944-3700

Textbook publisher. Also publishes computer books and administrative software.

Addison-Wesley Publishing Co. School Division 2725 Sand Hill Road Menlo Park, CA 94025 415/854-0300 School division of major textbook re

School division of major textbook publisher. Produces software.

Advanced Logic Systems
1195 E. Arques Ave.
Sunnyvale, CA 94086
408/730-0306
Manufactures peripheral plug-in boards for

the Apple computer.

The Advance Products Co.★
P.O. Box 2178

P.O. Box 2178
Wichita Falls, KS 67201
316/263-4231
Manufactures computer work stations.

Advanced Technology Applications 4296 Tambor Court San Diego, CA 92124 714/569-2693

Develops classroom management software.

Adventure International ★ P.O. Box 3435 Longwood, FL 32750

305/862-6917
Produces game, utility and interactive-fiction software.

Adwar Video Corp. 100 5th Ave. New York, NY 10011 212/691-0976

Manufactures computer-videotape interfaces.

Ahl Computing
Ziff-Davis Publishing Co.
1 Park Ave.
New York, NY 10016
212/725-7616
Publishes computing magazines.

Alfred Publishing Co., Inc. 15335 Morrison St. P.O. Box 5964 Sherman Oaks, CA 91413 213/995-8811 Publishes educational how-to books

Publishes educational how-to books, including computer series.

Allyn and Bacon, Inc.
7 Wells Ave.
Newton, MA 02159
617/964-5530
Publishes K-12 textbooks and computer books.

Alpha II, Inc. 1638 S. Division Grand Rapids, MI 49507 616/241-2417

Specializes in educational management systems, inservice training and consulting.

Alphacom, Inc.
2323 S. Bascom Ave.
Campbell, CA 95008
408/559-8000
Manufactures and distributes printers.

Amdek Corp.
2201 Lively Rd.
Elk Grove Village, IL 60007
312/364-1180
Manufactures monitors and other m

Manufactures monitors and other micro-computer peripherals.

American Educational Computer, Inc.

525 University Ave. Suite 1400 Palo Alto, CA 94303 415/324-2811

Develops and publishes software. Also distributes and services microcomputers in schools.

★ Free product literature available

AMMS Company★

Research Technology International 4700 Chase Ave. Lincolnwood, IL 60646 312/677-3000

Develops and manufactures automated media-management systems for libraries.

The Answer in Computers 6035 University Ave. Suite 7 San Diego, CA 92115 714/287-0795

Produces an authoring language for CP/M-based computers.

Anvil Cases, Inc. 4128 Temple City Blvd. Rosemead, CA 91770 213/575-8614

Produces reusable carrying cases for computer equipment.

Apple Computer, Inc.★ 10260 Bandley Drive Cupertino, CA 95014 408/996-1010

Produces personal computers that can be customized for education.

Apple Education Foundation 20525 Mariani Ave. Cupertino, CA 95014 408/973-2102

Provides grants to support educational computing projects. Publishes *The Journal of Courseware Review*.

Apple for the Teacher 2331 Rainbow Ave. Sacramento, CA 95821 916/485-1690

Produces authoring systems for Apple computers.

Applied Educational Systems RFD 2 P.O. Box 213 Dunbarton, NH 03301 603/774-6151

Produces school administrative software.

Applied Software Technology 14125 Capri Drive Los Gatos, CA 95030 408/354-1049

Develops software for Apple and IBM personal computers. Appropriate for administrative use.

producers and publishers

Aquarius Publishers, Inc.★
P.O. Box 128
Indian Rocks Beach, FL 33535
813/595-7890

Produces basic skills and other software for middle and high school students.

Assn. for Computers in Mathematics and Science Teaching

P.O. Box 4455 Austin, TX 78765 512/258-8083

Association of math and science teachers interested in the educational applications of computers.

Assn. for Educational Communications & Technology 1126 16th St., N.W. Washington, DC 20036 202/466-4780

Professional association for people interested in all aspects of educational technology.

Assn. for Educational Data Systems

1201 16th St., N.W. Washington, DC 20036 202/822-7845

Nonprofit educational computing association provides workshops, conventions and publications.

ATARI, Inc.

Home Computer Division 1196 Borregas Ave. Sunnyvale, CA 94086 800/538-8547

Manufactures computers, peripherals and software.

ATS Cases
25 Washington Ave.

P.O. Box 774 Natick, MA 01760 617/653-6724

Manufactures carrying and shipping containers.

A.U. Software
P.O. Box 597
Colleyville, TX 76034
817/267-5236
Produces special education software.

Automated Functions, Inc. 4545 Connecticut Ave., N.W. Suite 813 Washington, DC 20008 202/362-6292

Produces speech synthesis software for use by the blind.

Avant-Garde Creations P.O. Box 30160 Eugene, OR 97403 503/345-3043

Produces business, education, utility and entertainment software. Also distributes some small hardware items.

Axiom Corp. 1014 Griswold Ave. San Fernando, CA 91340 213/365-9521

Manufactures low-cost impact and nonimpact printers for all personal computers.

Axlon Inc. 170 N. Wolfe Rd. Sunnyvale, CA 94086 408/730-0216

Manufactures electronic memory devices, disk drives and data terminals.

Basic Books Inc. 10 East 53rd St. New York, NY 10022 212/593-7078

Publishes trade books, including some on computers.

Basics and Beyond, Inc.★ Pinesbridge Rd.

P.O. Box 10 Amawalk, NY 10501 914/962-2355

Produces microcomputer software for education and recreation.

Bausch & Lomb

Instruments and Systems Div. P.O. Box 15720 Austin, TX 78761 512/835-0900

Produces a line of plotters and graphics pads.

Bayshore Books★
705 Bayshore Rd.
P.O. Box 848
Nokomis, FL 33555
813/485-2564

Publishes computer literacy books for children.

BCD Associates, Inc. 1216 N. Blackwelder Ave. Oklahoma City, OK 73106 405/524-7403

Produces hardware and software for interactive video instruction.

Bell & Howell Co.★ 7100 N. McCormick Rd. Chicago, IL 60645 312/262-1600

Manufactures audiovisual equipment, a microcomputer and authoring systems.

Bertamax, Inc.

Micro School Programs 101 Nickerson St. Suite 202 Seattle, WA 98109 206/282-6249

Develops math, early education, language arts and management software for TRS-80 and Apple computers.

Borg-Warner Educational Systems 600 West University Dr.

Arlington Heights, IL 60004 800/323-7577

Produces computer-based curricula in language arts and math for Apple computers.

Brain Box

70 E. 10th St. New York, NY 10003 212/777-7035

Develops educational software featuring step-by-step instruction in various subject areas.

Bretford Manufacturing, Inc.★

9715 Soreng Ave. Schiller Park, IL 60176 312/678-2545

Manufactures furniture for audiovisual, computer and video equipment.

★ Free product literature available

BRS Bibliographic Retrieval Services 1200 Route 7 Latham, NY 12110 518/783-1161

Offers on-line information services, including the computer network, SPIN (School Practices Information Network).

Buss

325 Pennsylvania Ave., S.E. Washington, DC 20003 202/544-0900

Publishes newsletter and supplier directory for users of Heathkit and Zenith computers.

Byte Publications, Inc. 70 Main St. Peterborough, NH 03458 603/924-9281

Publishes computer magazines for both experienced and inexperienced users. A division of McGraw-Hill.

Cactus Software 1442 North McAllister Tempe, AZ 85281

Produces mathematics utility software.

Cambridge Development Laboratory 36 Pleasant St. Watertown, MA 02172 617/926-0869

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Camelot Publishing Co.★
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Manufactures interface boards for most major microcomputers.

Casio Inc. 15 Gardner Rd. Fairfield, NJ 07006 201/575-7400

Manufactures calculators and pocket computers.

Cavri Systems, Inc. 26 Trumbull St. New Haven, CT 06511 203/562-4979

Produces hardware and software for interactive video. Consults to schools and provides training programs.

The Center for the Humanities, Inc.

Communications Park P.O. Box 1000 Mt. Kisco, NY 10549 800/431-1242

Produces educational filmstrips and videotapes, including computer literacy series.

Centronics Data Computer Corp. One Wall St. Hudson, NH 03051 603/883-0111

Centurion Industries, Inc. 167 Constitution Dr. Menlo Park, CA 94025 415/321-0800

Manufactures computer printers.

Manufactures microcomputer-based learning aids that support mastery in arithmetic, reading and spelling.

CGRS Microtech, Inc. P.O. Box 102 Langhorne, PA 19047 215/757-0284

Manufactures microcomputer accessories and distributes software.

Chariot Software Group 3101 Fourth Ave. San Diego, CA 92103 714/298-0202

Develops and publishes management software.

Charles Mann and Associates Microsoftware Division 55722 Santa Fe Trail Yucca Valley, CA 92284 714/365-9718

Management consulting firm that also produces educational software.

★ Free product literature available

Chatsworth Data Corp. 20710 Lassen St. Chatsworth, CA 91311 213/341-9200

Manufactures card readers and intelligent terminal.

Churchill Films 662 N. Robertson Blvd. Los Angeles, CA 90069 213/657-5110

Sells films and videotapes including two on computers. Offers free previews to schools.

Comm*Data Systems, Inc.

320 Summit Ave. P.O. Box 325 Milford, MI 48042 313/685-0113

Publishes monthly magazine of elementary education software on cassette.

Commodore Business Machines

The Meadows 487 Devon Park Rd. Wayne, PA 19087 215/687-9750

Manufactures microcomputer systems and other consumer electronics products.

CommuniTree Group★

470 Castro St. Suite 207-3002 San Francisco, CA 94114 415/474-0933

Designs and markets telecommunications and conferencing software for microcomputers.

COMPress

Science Books International, Inc. P.O. Box 102 Wentworth, NH 03282 603/764-5831 Produces educational software for Cr

Produces educational software for Grades 11 and up.

Compued 920 N.W. 179 Terrace Miami, FL 33169 305/652-6120

Produces educational software for elementary and secondary school students.

COMPUMAX, Inc.

P.O. Box 7239 Menlo Park, CA 94025 415/854-6700

Produces software, including an authoring system for schools.

producers and publishers

CompuSoft Publishing 1050-E Pioneer Way El Cajon, CA 92020 714/588-0996 Publishes computer books.

Compu-Tations Inc.
P.O. Box 502
Troy, MI 48099
313/524-2317
Develops and sells preschool to college edu-

cational software and management systems.

COMPUTE! Publications
Small System Services, Inc.
P.O. Box 5406
Greensboro, NC 27403
919/275-9809
Publishes the monthly magazine COMPUTE! as well as books.

Computer-Advanced Ideas Inc.
1442A Walnut St.
Suite 341
Berkeley, CA 94709
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Produces general and special needs educational software and authoring systems.

Computer Assisted Instruction, Inc. 6115 28 St., S.E. Grand Rapids, MI 49506 616/942-2891 Designs reading software that emphasizes comprehension, retention and vocabulary development.

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St. Paul, MN 55101
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business ed. and life skills software.

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Computer Creations Inc.
P.O. Box 516
Amsterdam, NY 12010
518/883-8239
Produces language arts software with an emphasis on writing.

Computer Curriculum Corp.★
P.O. Box 10080
Palo Alto, CA 94303
800/227-8324
Produces hardware and software curriculum systems.

Computer's Voice
2370 Ella Drive
Flint, MI 48504
313/238-5585
Develops educational software including math, language arts and management pack-

ages.

Concept Educational Software P.O. Box 6184 Allentown, PA 18001 215/266-1679 Develops educational software in most sub-

ject areas and grade levels.

CONDUIT
P.O. Box 388
Iowa City, IA 52244
319/353-5789
Produces and distributes teacher-created, peer-reviewed software.

Control Data Corporation 8100 34th Ave. South P.O. Box O Bloomington, MN 55440 612/853-8100 Computer, financial and education services

firm. Produces the PLATO system.

Corvus Systems, Inc.
2029 O'Toole Ave.
San Jose, CA 95131
408/946-7700
Manufactures hard disks, networking sys-

tems and a microcomputer.

ware.

Courseware Associates Inc.
8710 Park Lane
Dallas, TX 75231
214/692-9716
Produces voice synthesizer and utility soft-

Courseware®, Inc. 10075 Carroll Canyon Rd. San Diego, CA 92131 714/578-1700

Educational research and development company that produces instructional and management software.

Cove View Press
P.O. Box 810
Arcata, CA 95521
707/822-7079
Publishes books and software.

Cow Bay Computing P.O. Box 515 Manhasset, NY 11030 516/365-4423

Publishes and distributes programming workbooks and software for classroom and administrative use.

Creative Computing Software Ahl Computing 39 E. Hanover Ave. Morris Plains, NJ 07950 800/631-8112

Produces educational software and distributes selected MECC educational software.

Creative Curriculum, Inc. Computer Courseware Div. 15632 Producer Lane Huntington Beach, CA 92649 800/854-2443

Produces reading and language arts software for Grades 7 + .

Creative Publications 3977 E. Bayshore Rd. P.O. Box 10328 Palo Alto, CA 94303 415/968-3977

Publishes and distributes K-12 math, language arts and computer literacy software.

Cromemco, Inc. 280 Bernardo Ave. Mountain View, CA 94040 415/964-7400

Produces software and distributes Z80- and 68000-based hardware products.

Cross Educational Software
P.O. Box 1536
Ruston, LA 71270
318/255-8921
Produces software and sells through mail

order to schools.

114 INSTRUCTOR 1982-83 Computer Directory for Schools

Cuisenaire Co. of America, Inc. 12 Church St. P.O. Box D New Rochelle, NY 10805 914/235-0900

Publishes materials for Grades K-8, with special emphasis on manipulatives, microcomputer software and custom kits.

Curriculum Applications P.O. Box 264 Arlington, MA 02174

Produces educational software including foreign language vocabulary games.

Data Command

Imperial International Learning Corp. P.O. Box 548 Kankakee, IL 60901 815/933-7735

Produces language arts software.

Data Dynamics Technology 16704 Marquardt Ave. Cerritos, CA 90701 231/926-9548

Distributes computer science books through mail order.

Database for Education 200 S. Service Rd. Roslyn Heights, NY 11577 516/621-1540

Produces data base management systems for education.

Dataroyal Inc.
235 Main Dunstable Road
Nashua, NH 03061
603/883-4157
Manufactures computer printers.

Datasouth Computer Corp.★
4216 Stuart Andrew Blvd.
P.O. Box 240947
Charlotte, NC 28224
704/523-8500
Manufactures general purpose, dot-ma

Manufactures general purpose, dot-matrix printers.

T. S. Denison and Co., Inc. 9601 Newton Ave. S. Minneapolis, MN 55431 612/888-1460

Publishes teaching aids for preschool through junior high school, including computer books.

DeZoysa Enterprises
P.O. Box 170
Keyport, NJ 07735
201/739-1981
Produces information storage and retrieval

software.

Digital Equipment Corp.
Educational Computer Systems
200 Forrest St.
Marlboro, MA 01752
617/467-6109

Produces computer hardware and components.

dilithium Press★
11000 S. W. 11th St.
Suite E
Beaverton, OR 97005
800/547-1842

Computer book publisher specializing in introductory materials.

Walt Disney Educational Media Co.

500 S. Buena Vista Burbank, CA 91521 213/840-1715

Produces films, including one about computers. Software planned.

Diversified Educational Enterprises, Inc. 725 Main St. Lafayette, IN 47901 317/742-2690 Produces math and science software. Also

Produces math and science software. Also consults.

DLM, Inc.

subject areas.

Developmental Learning Materials Div. One DLM Park Allen, TX 75002 800/527-4747

Educational publishing company that publishes arithmetic software.

Dorsett Educational Systems, Inc. P.O. Box 1226 Norman, OK 73070 405/288-2300 Develops K-12 educational software in all Doss Industries
1224 Mariposa St.
San Francisco, CA 94107
415/861-2223
Manufactures cabinets for computers.

Dresden Associates P.O. Box 246 Dresden, ME 04342

207/737-4466
Publishes School Microware Reviews and School Microware Directory.

Duxbury Systems, Inc. 77 Great Road Acton, MA 01720 617/263-7761

Produces software-hardware systems for the visually impaired.

Dynacomp, Inc. 1427 Monroe Ave. Rochester, NY 14618 800/828-6772

Publishes and distributes software for Apple, ATARI, TRS-80, Osborne and PET/CBM microcomputers.

Dysan Corp. 5201 Patrick Henry Dr. Santa Clara, CA 95050 408/988-3472

Manufactures disks, diskettes, hard disks and cassettes.

George Earl 1302 S. Gen. McMullen Dr. San Antonio, TX 78237 512/434-3681

Produces language arts, foreign language and algebra software.

Educational Activities, Inc. P.O. Box 392 Freeport, NY 11520 800/645-3739

Produces and distributes software, print, audiovisual and multimedia materials.

Educational Computer Magazine P.O. Box 535 Cupertino, CA 95015 408/252-3224

Publishes bimonthly educational computing magazine.

producers and publishers

Educational Computing Systems, Inc.

106 Fairbanks Rd. Oak Ridge, TN 37830 615/483-4915

Retail computer store staffed by teachers who can give training. Also produces soft-

Educational Courseware

10 Bay St. Dept. 66 Westport, CT 06880 203/227-1438

Produces science, management and computer literacy software.

Educational Development Corp.

8141 E. 44th St. Tulsa, OK 74145 918/622-4522

Educational publisher that produces test scoring software and audiovisual aids.

Educational Insights

150 W. Carob St. Compton, CA 90220 213/979-1955

Publishes supplementary educational materials, including computer books and an electronic learning aid.

Educational Research and Innovations

927 E. Grand River E. Lansing, MI 48823 616/241-2417

Educational consulting firm specializing in customized management systems.

Educational Software & Marketing Co.★

1035 Outer Park Dr. Suite 309

Springfield, IL 62704 217/787-4594

Custom designs administrative software for schools.

Educational Teaching Aids

159 W. Kinzie Chicago, IL 60610 312/644-9438

Produces non-textual educational materials and math software. Distributes software.

Educational Technology Publications,Inc.★

140 Sylvan Ave. Englewood Cliffs, NJ 07632 201/871-4007

Publishes books and Educational Technology Magazine.

Educulture, Inc.

1 Dubuque Plaza Suite 803 Dubuque, IA 52001 319/557-9610

Publishes tutorial systems with audio components for secondary through college level and language arts software.

Edunet EDUCOM P.O. Box 364 Princeton, NJ 08540

609/734-1915

Telecommunications network of universities and colleges that publishes networking software.

Edu-Soft

Steketee Educational Software 4639 Spruce St. Philadelphia, PA 19139 215/747-1284

Develops wide variety of software for Apple, TRS-80 and ATARI computers.

EduTech

634 Commonwealth Ave. Newton Centre, MA 02159 617/965-4813

Produces science and math software, including many simulations.

Edu-Ware Services, Inc. 28035 Dorothy Dr. P.O. Box 22222 Agoura, CA 91301

interactive fantasies.

213/706-0661
Publishes computer-aided instruction and

★ Free product literature available

Eiconics, Inc.★
211 Cruz Alta Rd.
P.O. Box 1207
Taos, NM 87571
505/758-1696

Develops educational and computer language systems and provides consulting services.

Electronic Communications Inc.

P.O. Box 20221 Tallahassee, FL 32304 904/878-4178

Publishes *Electronic Education* and manages exhibits for educational and professional organizations.

Electronic Courseware Systems,

Inc.

P.O. Box 2374 Station A Champaign, IL 61820 217/359-7099

Publishes software and provides consulting services to educators using computers.

Electronic Specialists, Inc.★

171 South Main St. Natick, MA 01760 617/655-1532

Designs and manufactures interference control devices.

Elliam Associates

24000 Bessemer St. Woodland Hills, CA 91367 213/348-4278

Develops utility software for CP/M-based systems.

Emtrol Systems Inc.★

123 Locust St. Lancaster, PA 17602 717/291-1116

Manufactures a modem for TRS-80 Models I and III.

Encyclopaedia Britannica Educational Corp.

425 N. Michigan Ave. Chicago, IL 60611 800/621-3900

Produces software in most subject areas and computer literacy films.

En-Joy Computer Programs

P.O. Box 1535 Goleta, CA 93116 805/735-1941 Produces educational software, including programs that teach user to play a musical instrument.

ENRICH/OHAUS

2325 Paragon Dr. San Jose, CA 95131 408/263-7111

Publishes supplemental basic skills activity books for preschool through eighth grade.

Entelek★

Ward-Whidden House, The Hill P.O. Box 1303 Portsmouth, NH 03801 603/436-0439

Publishes computer books and math and science software.

EPIE Institute P.O. Box 620

Stony Brook, NY 11790 516/246-8664

The nation's only consumer agency for educational materials. Produces reports on hardware and software.

Epson America, Inc. 3415 Kashiwa St. Torrance, CA 90505 213/539-9140

Manufactures printers, interface boards and a microcomputer.

Evans Newton Inc.
7745 E. Redfield Rd.
Suite 100.
Scottsdale, AZ 85260
602/998-2777
Produces three administrative programs.

Far West Laboratory 1855 Folsom St. San Francisco, CA 94103 415/565-3151

Nonprofit organization provides research, development and technical assistance in educational computing.

Franklin Computer Corp.
7030 Colonial Hwy.
Pennsauken, NJ 08109
609/488-1700
Manufactures a personal computer.

General Interface Systems, Inc.★
352 South Hartz Ave.
Danville, CA 94526
415/838-2683

Electronics firm produces microcomputer interfaces, switches and uninterruptible power sources.

General Technical Corp. 4101 N. St. Joseph Ave. Evansville, IN 47712 812/423-4200

Produces hardware and software systems for computerized, interactive television.

Guidance Associates, Inc. Communications Park P.O. Box 3000 Mt. Kisco, NY 10549 800/431-1242

Publishes books and audiovisual materials, including a computer literacy film.

Harcourt Brace Jovanovich

School Department 757 Third Ave. New York, NY 10017 212/888-4433

Publishes educational books and software keyed to HBJ K-12 textbooks.

Hartley Courseware, Inc. P.O. Box 431

Dimondale, MI 48821 616/942-8987

Develops math, language arts, early education and management software.

Harvest Publishing 118A Magazine St. Cambridge, MA 02139 617/547-3289 Publishes Logo newsletter.

Hayden Book Company, Inc.

50 Essex St. Rochelle Park, NJ 07662 201/843-0550

Publishes technical, computer science and educational books, software, magazines.

Hayden Software
Hayden Book Company
50 Essex St.
Rochelle, NJ 07662
201/843-0550
Software division of textbook publisher.

Hayes Microcomputer Products,

5835 Peachtree Corners East Norcross, GA 30092 404/449-8791

Manufactures modems and other computer peripherals.

D.C. Heath and Company

125 Spring St. Lexington, MA 02173 617/862-6650

Publishes K-12 educational materials, including a computer-based management system for Heath Mathematics.

Heathkit Education Systems Zenith Radio Corp. Benton Harbor, MI 49022 616/982-3200

Produces electrical and computer equipment and do-it-yourself kits and educational software.

Hewlett Packard Co. Personal Computer Div. 1010 N.E. Circle Blvd. Corvellis OP 97330

Corvallis, OR 97330 503/757-2000

Manufactures computers and electronic equipment.

High Technology Software Products, Inc.

P.O. Box 14665 2201 N.E. 63rd St. Oklahoma City, OK 73113 405/478-2105

Produces chemistry simulations.

Hoffman Educational Systems

1220 Flower Ave. Duarte, CA 91010 213/303-1571

Produces computerized reading and math learning centers, career centers and test-scoring systems.

Holt, Rinehart & Winston, Inc.

School Department 383 Madison Ave. New York, NY 10017 212/872-2206

Major educational publisher produces classroom management software.

INSTRUCTOR 1982-83 Computer Directory for Schools 117

producers and publishers

Honeywell Information Systems Inc.

200 Smith St. Waltham, MA 02154 617/895-6000

Information processing arm of Honeywell, Inc. Manufactures computers and computer-related products.

Houghton Mifflin Co. One Beacon St. Boston, MA 02107 617/725-5000

Publishes educational materials and trade books for all levels including language arts and management software.

H. Wilson Co. 555 W. Taft Dr. South Holland, IL 60473

Manufacturers furniture and fixtures for schools and offices. Distributes through local dealers.

IBM

Information Systems Div. P.O. Box 1328 Boca Raton, FL 33432 800/447-4700

Product line includes a personal computer, for which IBM distributes software.

Ideal School Supply Co. 11000 S. Lavergne Ave. Oak Lawn, IL 60453 312/425-0800

Manufactures curriculum materials for preschool through secondary and for special education students.

Ideatech Co. P.O. Box 62451 Sunnyvale, CA 94088 408/985-7591

Produces elementary level software in most subject areas.

Information Unlimited Software, Inc.

281 Arlington Ave. Berkeley, CA 94707 415/525-9452

Software marketing house that produces astronomy programs.

InfoWorld

530 Lytton Ave. Palo Alto, CA 94301 415/328-4602

Publishes the computer newsweekly, InfoWorld.

Instant Software[™], Inc. Wayne Green, Inc.

Route 101 Peterborough, NH 03458 603/924-9471

Publishes business, game, education, simulation and utility software.

Institute for Applied Human Resources★

120 Prospect St. South Orange, NJ 07079 201/761-0884

Produces both standard and customdesigned instructional management systems for mini- and microcomputers.

Instructional/Communications Technology Inc.

10 Stepar Place Huntington Station, NY 11746 516/549-3000

Produces print, audiovisual and computerbased reading and language arts materials at all levels.

Instructional Development Systems 2929 Virginia Beach Blvd. Virginia Beach, VA 23452 804/340-1977

Produces software including an authoring language and computer supplies and peripherals.

Instructor Publications, Inc. 757 Third Avenue New York, New York 10017 212-888-3400

Publishes *Instructor* and Instructor's computer directory for schools.

Integrated Futures 725 Main Street Lafayette, IN 47901 317/742-2690

Publishes classroom management software.

Intel Corp.

Educational Products Group SC5-784 3065 Bowers Ave. Santa Clara, CA 95051 408/987-8080 Division of semiconductor manufacturer. Produces kits for microcomputers and publishes *Innovator Magazine*.

Intelligent Devices Corp.

1 Cameron Street Wellesley, MA 02181 617/237-7327

Manufactures single-board microcomputers and peripherals.

Intelligent Systems Corp.★

225 Technology Park Norcross, GA 30092 404/449-5961

Manufactures color graphics terminals and microcomputers.

Intentional Educations, Inc.

341 Mt. Auburn St. Watertown, MA 02172 617/924-8927

Produces textbooks, software and the magazine Classroom Computer News.

Interactive Microware, Inc.

P.O. Box 771 State College, PA 16801 814/238-8294

Produces math and science graphics software.

International Council for Computers in Education★

University of Oregon

Dept. Computer and Information Science

Eugene, OR 97403 503/686-4414

Nonprofit corporation that promotes educational computing. Publishes *The Computing Teacher* and books.

International Software Marketing,

120 E. Washington St. Suite 421, University Bldg. Syracuse, NY 13202 315/474-3400

Produces story disks and math software appropriate for both classroom and administrative use.

Interpretive Education, Inc.★

157 S. Kalamazoo Mall Suite 250 Kalamazoo, MI 49007

616/345-8681

Produces multimedia and microcomputer educational programs teaching basic living skills to special needs students.

Jadee Enterprises 1799 Meadowlake Dr. Charleston, IL 61920 217/345-4753

Produces math, science and computer literacy software.

Jamestown Publishers P.O. Box 6743 Providence, RI 02940 401/351-1915

Develops materials for improving reading and study skills for students at all levels.

JMScandura Associates Instructional Micro Systems, Inc. 1249 Greentree Lane Narberth, PA 19072 215/662-1207

Produces language arts, math and lesson writing software.

J & S Software 140 Reid Ave. Port Washington, NY 11050 516/944-9304

Produces science software for Grades 8 and up and a management system.

Kalglo Electronics Co. Inc.★
Colony Drive Industrial Park
6584 Ruch Rd., E. Allen Tpk.
Bethlehem, PA 18017
215/865-0006
Manufactures electronics equipment.

K8 Software P.O. Box 248 Canton, CT 06019 203/693-4786

Produces language arts and math software for Grades 3-8.

Kidstuff P.O. Box 345 Dedham, MA 02026 617/326-0917

Produces *Kidstuff* computer language. Plans to develop other educational software products.

Krell Software Corp. 1320 Stony Brook Rd. Stony Brook, NY 11790 516/751-5639

Produces a version of Logo, college board preparation and German language software.

K-12 MicroMedia, Inc.★
172 Broadway
Woodcliff, NJ 07675
201/391-7555

Produces and distributes software and books.

Kurzweil Computer Products 33 Cambridge Parkway Cambridge, MA 02142 617/864-4700

Xerox subsidiary produces reading machine for the visually impaired.

The Learning Company★
4370 Alpine Road
Portola Valley, CA 94025
415/851-3160

Produces software that helps children learn to think conceptually. For preschool through eighth grade.

Learning Tools Inc.★ 686 Massachusetts Ave. Cambridge, MA 02139 617/864-8086

Produces administrative software that covers I.E.P. management.

Learning Unlimited Corp.★
P.O. Box 272
Fairfield, OH 45014
513/867-8933

Develops computer-based learning management systems.

Learning Well™
200 South Service Road
Roslyn Heights, NY 11577
516/621-1540
Develops reading games.

The Learning Works, Inc. P.O. Box 6187 Santa Barbara, CA 93111 805/964-4220

Educational publisher specializes in spirit duplicating masters and reproducible activity books.

Level IV Products, Inc. 32429 Schoolcraft Rd. Livonia, MI 48150 313/525-6200 Produces language arts software.

★ Free product literature available

The Liberty Software Co. 635 Independence Ave., S.E. Washington, DC 20003 202/544-6674
Produces math software.

Lightning Software P.O. Box 11725 Palo Alto, CA 94301 415/327-3280

Produces typing game. Plans a new line of software for October 1982.

Little Bee Educational Programs P.O.Box 262 Massillon, OH 44648 216/832-4097

Develops software for use in elementary grade reading programs.

Little, Brown and Company
34 Beacon St.
Boston, MA 02106
617/227-0730
Publishes trade books, including som

Publishes trade books, including some computer titles.

Logo Computer Systems, Inc.★
222 Brunswick Blvd.
Pointe Claire, Quebec
Canada H9R 1A6
514/694-2885
Produces a version of Logo for the Apple.

Luxor Corp.

2245 Delany Rd.

Waukegan, IL 60085
312/244-1800

Manufactures furniture for audiovisual,

video, photographic and computer equipment.

Macmillan Publishing Co., Inc. School/Marketing Div. 866 Third Ave. New York, NY 10022 212/935-2047 Educational publisher produces man-

agement software.

M/A-COM OSI 7 Oak Park Bedford, MA 01730 617/275-4400

Produces hardware ranging from single board computers to hard disk network systems.

producers and publishers

M & R Enterprises 910 George St. Santa Clara, CA 95050 408/980-0160

Produces computer boards and accessories.

Math and Computer Education Project

Lawrence Hall of Science University of California Berkeley, CA 94720 415/642-3167

Provides public access to computers and sponsors classes, workshops and exhibits. Publishes software and books.

Math Software 1233 Blackthorn Place Deerfield, IL 60015

Produces software using Apple color graphics.

Mathware
919 14th St.
Hermosa Beach, CA 90254
213/379-1570
Produces mathematics software.

Mattel Electronics
Mattel, Inc.
3600 Sepulveda
Manhattan Beach, CA 90266
213/553-1560
Manufactures electronic and video games.

Mattel Toys
Mattel, Inc.
5150 Rosecrans
Hawthorne, CA 90250
213/978-5150
Manufactures toys and learning aids.

McGraw-Hill Book Co.
Webster/EDL/McGraw-Hill Div.
1221 Ave. of the Americas
New York, NY 10020
212/997-1221
K-12 publisher produces softwar

K-12 publisher produces software, including math, social science and computer literacy programs.

McGraw-Hill Book Co. CRM/McGraw-Hill Div. P.O. Box 641 Del Mar, CA 92014 714/453-5000

Produces educational films and videotapes covering a range of curriculum topics, including computers.

McGraw-Hill Book Co. Gregg/McGraw-Hill 1221 Ave. of the Americas New York, NY 10020 800/223-4180

Publishes computer literacy, math and business software.

McPheters, Wolfe & Jones 16704 Marquardt Ave. Cerritos, CA 90701 213/926-9544 Publishes Interface Age Magazine.

Mech Mentor 105 S. Lincoln Mahomet, IL 61853 217/586-3006

Produces a microcomputer hardware/software system.

Media Materials, Inc.
2936 Remington Ave.
Baltimore, MD 21211
800/638-1010
Publishes software for elementary and re-

medial secondary students.

Media Systems Technology, Inc. 17991 Fitch Ave. Irvine, CA 92714 714/957-0240

Manufacturers automatic disk processing systems, including duplication equipment.

Meka Publishing Co.
9120 Galaxie Dr.
Indianapolis, IN 46227
317/888-1247
Publishes educational computing books.

Charles E. Merrill Publishing Co. 1300 Alum Creek Dr. Columbus, OH 43216 614/258-8441 Publishes textbooks at all levels, including

one on BASIC.

Metacomet Software P.O. Box 31337 Hartford, CT 06103 203/549-4464

Develops math and computer literacy software.

Metier *

P.O. Box 51204
San Jose, CA 95151
Produces math software and provides consulting.

Micro Computer Service, Inc.
2885 E. Aurora Ave.
Suite 14B
Boulder, CO 80303
303/447-9471
Provides hardware, software and consulting to school administrators.

Microcomputer Education Applications Network★ 256 N. Washington St. Falls Church, VA 22046

703/536-2310
Provides research and development for educational agencies and produces I.E.P. management software.

Microcomputer Information Services, Inc. ★
2464 El Camino Real
Suite 247
Santa Clara, CA 95051
408/984-1097
Publishes the Microcomputer Index™.

Microcomputer Workshops Corp.★ 103 Puritan Dr. Port Chester, NY 10573 914/937-5440

Produces teacher-written educational software for Grades K-12, in mathematics, language arts and science.

Microcomputers Corp. P.O. Box 8 34 Maple Ave. Armonk, NY 10504 914/273-6480

Produces math and language arts software with an emphasis on early education.

Micro-Ed, Inc. P.O. Box 24156 Minneapolis, MN 55424 612/926-2292

Produces a wide range of instructional software.

120 INSTRUCTOR 1982-83 Computer Directory for Schools

Micro-80 Inc.★
2665 N. Busby Industrial Rd.
Oak Harbor, WA 98277
206/675-6143

Manufactures and distributes computergrade cassettes and math software.

MicroGnome

Fireside Computing, Inc. 5843 Montgomery Rd. Elkridge, MD 21227 301/796-4165

Develops management software and offers consulting services and workshops.

Micrograms Inc.★
P.O. Box 2146
Loves Park, IL 61130
815/965-2464

Produces K-8 software and classroom management systems.

Micro Ink, Inc.

34 Chelmsford St.
P.O. Box 6502
Chelmsford, MA 01824
617/256-5515
Publishes a monthly magazine and books.

Micro Learningware P.O. Box 2134 N. Mankato, MN 56001 507/625-2205

Produces a wide range of instructional software.

Micromation, Inc.★
1620 Montgomery St.
San Francisco, CA 94111
415/398-0289
Manufactures multi-user computers.

The Microperipheral Corp. 2643 151st Place, N.E. Redmond, WA 98052 206/881-7544 Manufactures modems.

Microphys Programs
600 Northern Blvd.
Suite 106
Great Neck, NY 11020
516/829-5540
Produces math, science and language arts software.

Micro Power & Light Co. 12820 Hillcrest Rd. Suite 224 Dallas, TX 75230 214/239-6620

Develops and distributes software for Grades 4 and up and classroom management programs.

Micro-Sci

2158 S. Hathaway St. Santa Ana, CA 92705 714/662-2801

Manufactures floppy disk drives for Apple computers.

Micro Text Publications Inc.

One Lincoln Plaza Suite 27C New York, NY 10023 212/877-8539

Publishes computer science books and software.

Milliken Publishing Co. Computer Products Div. 1100 Research Blvd. St. Louis, MO 63132 314/991-4220

Publishes computer software for Grades 1-12, covering a variety of curriculum areas.

Milton Bradley Educational Div. 443 Shaker Rd. East Longmeadow, MA 01028 413/525-6411

Manufactures games and educational materials, including math and language arts software.

Mimic, Inc.
P.O. Box 921
Acton, MA 01720
617/263-2101
Manufactures digital speech processors and related software.

Mini-Micro Systems 221 Columbus Ave. Boston, MA 02116 617/536-7780 Publishes trade magazines.

★ Free product literature available

Minnesota Educational Computing Consortium (MECC) 2520 Broadway Dr. Saint Paul, MN 55113 612/376-1105

Nonprofit organization develops, tests and distributes instructional and administrative software.

Modtec

4144 N. Via Villas Tucson, AZ 85719 602/293-5186

Manufactures and distributes utility and educational software.

Monroe Systems for Business
The American Rd.

Morris Plains, NJ 07950 201/540-7600

Manufactures calculators, microcomputers and software.

Morgan-Fairfield Graphics

P.O. Box 5457 Seattle, WA 98105 206/632-1374

Produces automated, interactive graphics packages.

Mosaic Electronics

P.O. Box 708 Oregon City, OR 97045 503/655-9574

Manufactures memory expansion for ATARI computers.

Mosaic Media, Inc.★

526 N. Main St. P.O. Box 711 Glen Ellyn, IL 60137 312/790-1117

Publishes audio-tutorial cassettes with a fliptrack format.

Motorola Corp.

5005 E. McDowell Phoenix, AZ 85005 602/244-4945

Manufactures semiconductors and communications and electronics products.

Mountain Computer, Inc. 300 El Pueblo

Scotts Valley, CA 95066 408/438-6650

Produces specialty boards such as speech synthesizers for microcomputers.

producers and publishers

Mountain View Press, Inc. P.O. Box 4656 Mountain View, CA 94040 415/961-4103

Produces software for and about the FORTH language.

Msss D, Inc. 3412 Binkley Dallas, TX 75205 214/522-8051

Produces hardware to interface Apple computers with audiovisual projectors and an authoring system.

Muse Software 347 N. Charles St. Baltimore, MD 21201 301/659-7212

Designs professional, educational and recreational software for the Apple II and Apple II + .

National Council of Teachers of Mathematics★
1906 Association Dr.
Reston, VA 22091
703/620-9840

International organization publishes two magazines that cover computers in the math curriculum.

NEC Home Electronics, Inc. 1401 Estes Ave. Elk Grove Village, IL 60007 312/228-5900

American subsidiary of Japanese computer and electronics firm.

Nibble-Micro-Sparc, Inc.
P.O. Box 325
Lincoln, MA 01773
617/259-9710
Produces software and Nibble Magazine.

North Star Computers, Inc. 14440 Catalina St. San Leandro, CA 94577 415/357-8500 Produces microcomputer systems. Novation, Inc. 18664 Oxnard St. Tarzana, CA 91356 800/423-5419

Produces low-speed modems for micro-computers.

Orange Micro 3150 East La Palma Suite G Anaheim, CA 92806 714/630-3620

Produces computer printers and accessories. Plans to expand product line.

Osborne Computer Corp.
26500 Corporate Ave.
Hayward, CA 94545
415/887-8080
Manufactures a portable personal com-

Panasonic Co. H.H.C. Dept. 1 Panasonic Way Secaucus, NJ 07094 201/348-7292

products.

Sells consumer electronics, including a hand-held computer. Subsidiary of Matsushita Electric Industrial Company, Ltd.

Passport Designs Inc.
785 Main St.
Suite E
Half Moon Bay, CA 94019
415/726-0280
Manufactures computer music systems and

PCD Systems, Inc. ★
163 Main St.
P.O. Box 143
Penn Yan, NY 14527
315/536-7428

Develops and sells software, including programs appropriate for home economics classes.

Penguin Software 830 4th Ave. Geneva, IL 60134 312/232-1984 Publishes graphics design software.

People's Computer Co.★
1263 El Camino Real
P.O. Box E
Menlo Park, CA 94025
415/323-3111
Publishes a journal and runs Computertown, USA!

Personal Micro Computers, Inc.★ 475 Ellis St. Mountain View, CA 94043 415/962-0220

Produces a networking system for the TRS-80 Model I. Also markets hardware, software, peripherals, storage media.

Powersoft Inc. P.O. Box 157 Pitman, NJ 08071 609/589-5500

Publishes math, foreign language and vocational education software.

Precision People, Inc.★
P.O. Box 17402
Jacksonville, FL 32216
904/642-1980
Develops math and guidance software.

Prentice-Hall Inc.
Sylvan Avenue
Englewood Cliffs, NJ 07632
201/592-3127

Major textbook and trade book publisher has line of computer titles.

Program Design Inc. 11 Idar Court Greenwich, CT 06830 203/661-8799

Produces preschool through adult language arts, social studies and foreign language software.

Programs for Learning, Inc. P.O. Box 954 53 Bank Street New Milford, CT 06776 203/355-3452

Produces high school level chemistry software.

The Psychological Corp.★ 757 Third Ave. New York, NY 10017 212/888-3552

Produces educational and psychological tests. Some are computer-based.

Quality Educational Designs P.O. Box 12486 Portland, OR 97212 503/287-8137 Produces math software. Queue, Inc.★ 5 Chapel Hill Dr. Fairfield, CT 06432 203/335-0908

Distributes educational software and publishes the newsletter, *Microcomputers in Education*.

Radio Shack★
Tandy Corp.
1600 One Tandy Center
Fort Worth, TX 76102
817/390-3272

Manufactures and distributes retail electronics, microcomputers, peripherals and accessories.

Random House School Division 201 E. 50th St. New York, NY 10022 212/572-2593

Major educational publisher, produces language arts and math software.

Reader's Digest Services, Inc.★
Educational Div.
Pleasantville, NY 10570
914/769-7000

Publishes microcomputer software, supplementary reading, math and language arts texts. Vendor for Source network.

Reston Publishing Co.★
11480 Sunset Hills Rd.
Reston, VA 22090
703/437-8900
Publishes computer texts and software.

Right On Programs
Computeam, Inc.
P.O. Box 977
Huntington, NY 11743
516/271-3177
Produces K-12 educational software in a wide variety of subjects.

Rockwell International★
3310 Miralina
Anaheim, CA 92803
714/632-3824
Manufactures electronics and computer products.

Scholastic, Inc.★
50 W. 44th St.
New York, NY 10036
212/944-7700
Publishes Electronic Learning Magazine.
Distributes and will soon produce software.

School & Home CourseWare, Inc.
1341 Bulldog Lane
Suite C
Fresno, CA 93710
209/227-4341
Publishes School CourseWare Journal.

Science Software Systems, Inc. 11899 West Pico Blvd. West Los Angeles, CA 90064 800/421-6636

Publishes audiovisual and computer instructional materials and distributes Commodore computers.

Scientific Software Associates, Ltd. P.O. Box 208 Waufau, WI 54401 715/845-2066

Specializes in data processing programs that interface the Apple with several optical mark card readers.

SciTronics Inc. 523 S. Clewell St. P.O. Box 5344 Bethlehem, PA 18015 215/868-7220

Manufactures real time clocks, remote controllers, energy monitors and energy management systems.

Scott, Foresman and Co.★
Electronic Publishing Div.
1900 E. Lake Ave.
Glenview, IL 60025
312/729-3000
Educational publisher produces instructional and administrative software.

Scott Instruments Corp.
1111 Willow Springs Dr.
Denton, TX 76201
817/387-9514
Manufactures voice entry terminals.

Sliwa Enterprises Inc. P.O. Box 7266 Hampton, VA 23666 804/826-3777

Produces language arts, math and foreign language software. Many programs preparatory for college entrance exams.

★ Free product literature available

Serendipity Systems, Inc.
419 W. Seneca St.
Ithaca, NY 14850
607/277-4889
Publishes administrative and classroom management software for Apple computers.

Services Unique, Inc. 2441 Rolling View Dr. Dayton, OH 45431 513/429-0696 Develops utility software.

Sharp Electronics Corp. 10 Sharp Plaza Paramus, NJ 07652 201/265-5600

Manufactures copiers, calculators and pocket microcomputer.

D. J. Simair, Inc.
1532 Eric Rd.
Victoria B.C.
Canada U8N 5Y4
604/721-3698
Consults to school districts and develops administrative software.

Sinclair Research Ltd.
50 Staniford St.
Boston, MA 02114
617/742-4826
Produces hand-held computers and software.

Society for Visual Education,
Inc.★
The Singer Company
1345 Diversey Pkwy.
Chicago, IL 60614
312/525-1500
Produces computer literacy and other film/
software packages.

Society of Data Educators
983 Fairmeadow Rd.
Memphis, TN 38117
901/761-0727
Service organization promotes data education at all levels of education. Publishes journal.

Softalk Publishing, Inc. 11021 Magnolia Blvd. N. Hollywood, CA 91601 213/980-5074 Publishes magazines and books.

4 COMPANIES producers and

publishers

SofTech Microsystems, Inc. 9494 Black Mountain Rd. San Diego, CA 92126 714/578-6105

Produces systems software. Subsidiary of SofTech, Inc. Licenses UCSD Pascal.

Softside Publications 6 South St. Milford, NH 03055 603/673-0585 Computer magazine publisher.

SOFTSWAP

San Mateo County Office of Education 333 Main St. Redwood City, CA 94063 415/363-5470

Free software exchange of public domain programs.

Software Connections, Inc. 1800 Wyatt Drive Suite 17 Santa Clara, CA 95054 408/988-3704 Manufactures software for personal com-

Software Technology for Computers 430A Main St. Watertown, MA 02172 617/923-4334

puter network systems.

Produces software for the Apple and IBM personal computers, including a language arts package.

Solartek* RD #1 P.O. Box 255A West Hurley, NY 12491 914/679-5366 Develops solar energy related programs.

Sony Corporation of America★ Microcomputer Products Div. Sony Dr. Park Ridge, NJ 07656 212/930-1000 Manufactures video and computer pro**Sorcim Corporation** 405 Aldo Ave. Santa Clara, CA 95050 408/727-7634 Produces software including Spellguard™.

Sorrento Valley Associates, Inc. 11722 Sorrento Valley Rd. San Diego, CA 92121 714/452-0101

Manufactures expansion memory systems for Apple computers.

Source Telecomputing Corp.★ 1616 Anderson Rd. McLean, VA 22102 703/821-6660

Operates The Source, an on-line information service for personal computer users.

Special Delivery Software★ Apple Computer, Inc. 20525 Mariani Ave. Cupertino, CA 95014 408/996-1010 Software division of Apple Computer, Inc.

Special Learning ED Software P.O. Box 16322 Minneapolis, MN 55416 612/926-5820

Produces spelling software for PET and Apple microcomputers.

Spinnaker Software Corp. 215 First St. Cambridge, MA 02142 617/868-4700

Publishes learning games for children ages 5-18.

Stellation Two* P.O. Box 2342 The Lobero Bldg. Santa Barbara, CA 93120 805/966-1140 Develops and distributes Apple II peripher-

als and software.

Sterling Swift Publishing Co.★ 1600 Fortview Rd. Austin, TX 78704 512/444-7570 Publishes texts and software.

Storybooks of the Future 527 41st Ave. San Francisco, CA 94121 415/386-5184

Develops computerized storybooks for preschool through second grade.

Street Electronics 1140 Mark Carpinteria, CA 93013 805/684-4593

Designs and manufactures computer peripherals.

Studebaker Technology 28 Water St. Batavia, IL 60510 312/858-7869

Publishes newsletter and consults to schools.

SRA Science Research Associates, Inc.

155 N. Wacker Dr. Chicago, IL 60606 800/621-0664

Develops, publishes and markets wide range of educational materials, services and microcomputer software.

SubLOGIC Communications Corp. 713 Edgebrook Dr. Champaign, IL 61820 217/359-8482

Software producer and distributor specializing in 3D-graphic and flight simulation software.

Summagraphics Corp. 35 Brentwood Ave. Fairfield, CT 06430 203/384-1344

Manufactures four graphics tablet lines designed to meet varying application requirements.

Sunburst Communications 39 Washington Ave. Pleasantville, NY 10570 800/431-1934

Distributes MECC software and produces math and language arts software.

Sybex Inc. 2344 6th St. Berkeley, CA 94710 800/227-2346

Publishes computer books for beginning through advanced readers.

124 INSTRUCTOR 1982-83 Computer Directory for Schools

Synsor Corp. 2927 112 St., S.W. Everett, WA 98204 800/426-0193

Manufactures modular carrels for computer terminals, video and other audiovisual equipment.

Syntauri Corp. 3506 Waverley St. Palo Alto, CA 94306 415/494-1017

Manufactures and markets programmable synthesizers for teaching and recording music.

TALMIS, Inc.

Educational Programming Systems 502 Jackson Oak Park, IL 60301 312/848-4000

An information service for educational publishers.

T & W Systems, Inc. 18437 Mt. Langley #B Fountain Valley, CA 92708 714/963-3913

Develops computer-aided drafting systems for Apple and DEC computers.

Teacher's PET Software 1517 Holly St. Berkeley, CA 94703 415/526-8068

Produces math, language arts and management software for the Commodore PET.

Teaching Computer Programming 1112 Glacial Dr. Minot, ND 58701 701/838-6444

Publishes a newsletter for teachers of computer programming.

Teaching Tools: Microcomputer Services*

P.O. Box 50065 Palo Alto, CA 94303 415/493-3477

Produces elementary and special education software. Also conducts workshops.

★ Free product literature available

Teck Associates★ P.O. Box 8732 White Bear Lake, MN 55110 612/429-5570

Publishes and develops educational and graphics software and sells computer acces-

Telesensory Systems, Inc. 3408 Hillview Ave. P.O. Box 10099 Palo Alto, CA 94304 415/493-2626

Produces technical aids for the visually handicapped.

TERC (Technical Education Research Centers)

8 Eliot St. Cambridge, MA 02138 617/547-3890

Computer resource center conducts workshops and publishes books and a newsletter.

Terrapin, Inc.★ 380 Green St. Cambridge, MA 02139 617/492-8816 Manufactures Logo software and Terrapin

Turtle. Also distributes books.

Texas Instruments, Inc. **Personal Computer Division** P.O. Box 10508 Lubbock, TX 79408 800/858-4565

Produces electronic equipment ranging from calculators to microcomputers.

T.H.E. Journal Information Synergy, Inc. P.O. Box 992 Acton, MA 01720 617/263-3607 Publishes T.H.E. Journal.

T.H.E.S.I.S. * P.O. Box 147 Garden City, MI 48135 313/595-4722 Develops K-8 math and language arts software.

3M **Data Recording Products** 223 5N 3M Center St. Paul, MN 55144 800/736-9625

Manufactures and sells magnetic recording media and other accessories.

3R Software P.O. Box 3115 Jamaica, NY 11431

Produces language arts materials for elementary and secondary schools.

TIES: Total Information for Ed. **Systems**

1925 W. County Rd. B2 Roseville, MN 55113 612/633-9110

Cooperative of 60 independent school districts in Minnesota that produces software.

TNW Corp. 3444 Hancock St. San Diego, CA 92110 714/296-2115

Manufactures interfaces, modem and terminal software for PET, CBM and other IEEE 488 microcomputers.

Traxx Computer Corp.★ 1467 S. Michigan Ave. Chicago, IL 60605 312/987-1024 Manufactures floppy disk systems.

Triformation Systems, Inc.★ 3132 S.E. Jay St. Stuart, FL 33494 305/283-4817

Manufactures computer terminals for the

TR Software 26 Mohawk Circle Newington, CT 06111 203/667-2961

Produces administrative and business software for microcomputers.

True Data Corp. 17092 Pullman St. Irvine, CA 92714 714/979-4842

Manufactures mark sense card readers.

TSC

A Houghton Mifflin Co. P.O. Box 683 Hanover, NH 03755 603/448-3838

The electronic publishing subsidiary of Houghton Mifflin Company. Produces educational hardware/software systems.

producers and publishers

TYC Software 40 Stuyvesant Manor Geneseo, NY 14454 716/243-3005

Publishes educational software in most curriculum areas.

Tycom Associates★ 68 Velma Ave.
Pittsfield, MA 01201 413/442-9771

Produces language arts, math and foreign language software. Also custom application software.

Tymshare, Inc. 20705 Valley Green Dr. Cupertino, CA 95014 408/446-6000

Supplies information management and telecommunications services.

UNICOM Div. United Camera, Inc.

297 Elmwood Ave. Providence, RI 02907 401/467-5600

Educational computer dealer for the Northeast states has four demonstration centers. Also produces software.

Universal Data Systems 5000 Bradford Dr. Huntsville, AL 35805 205/837-8100

Manufactures modems and data analyzers. Division of Motorola Corp.

Universal Systems for Education, Inc.

2120-E Academy Circle Colorado Springs, CO 80909 303/574-4575 Produces reading skills software.

Verbatim Corp. 323 Soquel Way Sunnyvale, CA 94086 408/245-4400

Manufactures magnetic storage media for smaller computer systems.

Vidcom, Inc. 1234 Watchung Ave. Plainfield, NJ 07060 201/754-2377

Sells hardware and software for computerized videotape instruction.

Visual Materials Inc. 4170 Grove Ave. Gurnee, IL 60031 312/249-1710

Publishes software and hardware directories for the Apple II, also duplicating masters and transparencies.

Vital Information, Inc. 6720 W. 66 Terrace Overland Park, KS 66202 913/384-3860

Publishes software directories. Operates educator's software information hotline.

Votrax Division★
Federal Screw Works, Inc.
500 Stephenson Hwy.
Troy, MI 48084
313/588-0341

Manufactures electronic speech synthesis equipment.

Wang Laboratories, Inc.
One Industrial Ave.
Lowell, MA 01851
617/459-5000
Manufactures and markets computers and

office automation products.

Watanabe Instruments Corp.★
3186-D Airway Ave.
Costa Mesa, CA 92626
714/546-5344

Distributes plotters for most microcomputers.

Wayne Green Inc. 80 Pine St. Peterborough, NH 03458 603/924-9471

Publishes several general interest computing magazines and books.

West Side Electronics, Inc. P.O. Box 636 Chatsworth, CA 91311 213/884-4794

Manufactures and distributes Apple II accessories.

WFF 'N PROOF Learning Games

Associates 1490 South Blvd. Ann Arbor, MI 48104 313/665-2269

Manufactures educational games, computer software and curriculum programs.

Bill White

1863 Bitterroot Dr. Twin Falls, ID 83301

Develops management and math programs.

Window, Inc. 469 Pleasant St. Watertown, MA 02172 617/923-9147

Produces educational software and publishes *Window*, a magazine on disk for Apple II.

Winners Circle 708 Temple Bldg. Rochester, NY 14604 716/325-6493

Develops and markets educational software for elementary mathematics and business education.

Zweig Associates, Inc. Skillcorp Publishers, Inc. 1711 McGaw Ave. Irvine, CA 92714 800/848-8922

Produces both computerized and handscored diagnostic-prescriptive management systems.

* Free product literature available

Companies and Distributors: A note about reading these listings

The descriptions in this section reflect company and distributor product lines at the time we went to press. In a field growing as rapidly as educational computing, many firms may have already increased their offerings. Please note that many companies (marked by a large star) offer free product literature upon request.

Distributors

Academic Software 22 E. Ouackenbush Ave. Dumont, NJ 07628 201/385-2395

Distributes educational software for ATARI, Apple, PET and TRS-80 computers. Carries wide range of publishers. including Krell, Brain Box, PDI, Muse, Hartley, Edutek, Edu-Soft, 3R, Microphys. J & S Software and Creative Computing.

Activity Resources Co., Inc. 20655 Hathaway Ave. P.O. Box 4875 Hayward, CA 94540 415/782-1300

Publishes enrichment and supplementary materials for teachers, parents and children, K-12. Emphasizes math. Distributes Quality Educational Designs' math software.

American Educational Computer,

525 University Ave. Suite 1400 Palo Alto, CA 94303 415/324-2811

Develops educational software. Also distributes and services microcomputers in schools

A.P. Computer Products

8 Division Street Holtsville, NY 11742 516/698-8636

Distributes Apple, ATARI, Commodore and Texas Instruments computers, books, peripherals and some educational programs. Mail order.

Applied Educational Systems RFD 2 P.O. Box 213 Dunbarton, NH 03301 603/774-6151

Produces school administration software. Distributes the True Data Micro Mark II mark sense card reader.

Assn. for Computers in Mathematics and Science Teaching*

P.O. Box 4455 Austin, TX 78765 512/258-8083

Nonprofit organization publishes a journal and distributes computer books from major publishers through its discount Computer Book Center.

Atlantic Northeast Marketing, Inc. P.O. Box 921 Marblehead, MA 01945 617/639-0285

Distributes Casio and Sharp calculators and pocket computers.

BGS Enterprises BG Sound Div. 60 E. 9th St. New York, NY 10003 212/674-1185

Distributes Apple II + hardware and software and the IBM Personal Computer.

Compumart 65 Bent St. P.O. Box 568 Cambridge, MA 02139 617/491-2700

Distributes DEC, Apple, Rockwell, Commodore, ATARI and Hewlett Packard computers. Also compatible peripherals, books and software.

Com-Pute Services P.O. Box 3361 Oak Park, IL 60303 312/386-7733

Distributes private-label disks with oneyear warranty for most microcomputers. Offers school and bulk rates.

Computer Center 31 E. 31st St. New York, NY 10016 212/889-8130

New York computer store chain. Maintains a service center for educators. Distributes a wide range of hardware and software.

Computer Courseware Services Div. of EMC Publishing 300 York Ave. St. Paul, MN 55101 800/328-1452

Produces and distributes software in a wide range of curriculum areas.

Computer Discount of America,

15 Marshall Hill Rd. West Milford Mall West Milford, NJ 07480 800/526-5313

Distributes wide range of hardware plus Radio Shack and ATARI educational softComputer Mat P.O. Box 1664-J Lake Havasu City, AZ 86403 602/855-3357

Distributes hardware and software for all personal computers.

the Computer Store 55 Union Ave. P.O. Box K Sudbury, MA 01776 617/879-3700

Distributes Apple, Zenith and NEC hardware and a variety of software, peripherals, books and supplies in the northeast.

Creative Computing Software

39 E. Hanover Ave. Morris Plains, NJ 07950 800/631-8112

Produces software. Distributes MECC software.

Creative Publications 3977 E. Bayshore Rd.

Palo Alto, CA 94303 415/968-3977

Publishes and distributes K-12 math, language arts and computer education software. Distributes computer literacy books from most major publishers.

Data Dynamics Technology 16704 Marquardt Cerritos, CA 90701 213/926-9548

Distributes computer science books through mail order. Carries 1000 titles from 35 major publishers.

Data-Rite Industries, Inc. **Educational Systems Development Div.** P.O. Box 976 Spokane, WA 99210 800/541-9001

Distributes hardware and software including most major hardware brands and programs for most microcomputers.

Diskette Connection * P.O. Box 1674

Bethany, OK 73008 800/654-4058

Mail order distributor of disks, cassettes and other computer supplies.

Educational Computing System 106 Fairbanks Rd. Oak Ridge, TN 37830

615/483-4916

Retail computer store distributes Apple, ATARI, Osborne, Zenith computers and accessories. Also produces and distributes software.

4 COMPANIES distributors

Educational Teaching Aids 159 W. Kinzie Chicago, IL 60610 312/644-9438

Produces nontextual educational materials and math software. Distributes PDI, Hartley, Milton Bradley, Milliken and Interpretive Education software.

Eye Gate Media, Inc. 146-01 Archer Ave. Jamaica, NY 11435 212/291-9100

Produces supplementary materials and distributes over 200 microcomputer programs for Apple II, TRS-80, Commodore PET and Texas Instruments computers.

Fascination Software P.O. Box 1299 Brea, CA 92621 714/595-4504

Mail order distributor of hardware and software for Apple. Carries Creative Curriculum, Inc., Edu-Ware, Muse, STC and Versa Computing educational software, among others.

Fisher Scientific Co. Educational Materials Div. 4901 W. LeMoyne Ave. Chicago, IL 60651 312/378-7770

Sells Commodore computers to schools and colleges.

Follett Library Book Company 4506 Northwest Highway Crystal Lake, IL 60014 800/435-6170

Distributes computer books from publishers including Prentice-Hall, Addison-Wesley, dilithium Press, McGraw-Hill, John Wiley & Sons, Inc., Sterling Swift and Little Brown. Software line planned.

Huntington Computing★
1945 S. Dairy
P.O. Box 787
Corcoran, CA 93212
209/992-4481

Distributes Apple, ATARI, VIC-20 and IBM software from producers including PDI, CONDUIT, Hartley, Aquarius, J & S Software, Edu-Ware, Pendulum Press, Cook Computer Software, Muse and Dynacomp. Also hardware and books.

J.L. Hammett Company, Inc.★ Hammett Place

P.O. Box 545 Braintree, MA 02184 800/225-5467

Distributes Apple computers, software and books. Producers carried include: Apple, Hartley, Micro Power & Light, Lightning Software, Sterling Swift, PDI, Edu-Ware, Micro-Ed and MECC.

K-12 MicroMedia, Inc.★ 172 Broadway Woodcliff Lake, NJ 07675 201/391-7555

Produces and distributes software and books. Carries programs from 75 publishers.

Learning Systems, Ltd.
P.O. Box 9046
Ft. Collins, CO 80525
303/482-6193

Sells K-12 courseware in all subject areas.

The Learning Tree 45615 Van Dyke Utica, MI 48087 313/739-5900

Distributes Milliken, Hartley and Milton Bradley software.

Mafex Associates, Inc., Publishers★ 90 Cherry St. Box 519 Johnstown, PA 15907 800/458-0151

Publishes and distributes computer books and software in a wide range of subjects. Over 200 titles.

The Micro Center P.O. Box 6 Pleasantville, NY 10570 914/769-6002

Distributes instructional and management software for Apple, ATARI, PET and TRS-80 computers.

Micro Computer Service, Inc. 2885 E. Aurora Ave. Suite 14B Boulder, CO 80303 303/447-9471

Discount buying outlet provides microcomputers and related hardware and software to schools.

★ Free product literature available

Misco, İnc.★
P.O. Box 399
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Offers complete line of computer supplies and accessories through free mail order catalog.

Opportunities for Learning★ 8450 Lurline Ave. Chatsworth, CA 91311 213/341-2535

Distributes administration and instructional software at all levels for Apple, ATARI, PET and TRS-80 computers.

Pacific Exchanges 100 Foothill Blvd. San Luis Obispo, CA 93401 800/235-4137

Distributes all major brands of computer disks. Accepts school purchase orders. Accepts telephone orders.

Peripheral Systems, Inc. 225 East St. Winchester, MA 01890 617/729-7715

Distributes plotters and printers including: Infoscribe, Watanabe and Daisywriter. Also plotting software.

Queue, Inc.★ 5 Chapel Hill Drive Fairfield, CT 06432 203/335-0908

Distributes over 1000 K-12 software programs. Most publishers. For Apple, ATARI, PET and Radio Shack computers.

Rainbow Computing, Inc. 19517 Business Center Drive Northridge, CA 91324 213/349-0300

Sells Apple and DEC computer products. Develops software packages.

Saddleback Educational, Inc. 720-B S. Vail Ave. Montebello, CA 90640 213/721-5011

Distributes K-12 software and educational material. Software for all available computers.

Scholastic, Inc.★ 50 W. 44th St. New York, NY 10036 212/944-7700

Publishes *Electronic Learning Magazine*. Distributes books and over 300 software titles in most curriculum areas. For Apple, ATARI, PET, TRS-80 and TI-99/4 computers.

School Specialty Supply, Inc.★ 3525 S. Ninth St. P.O. Box 1327 Salina, KS 67401 913/827-0451

Sells school supplies, equipment and educational materials. Distributes K-12 software for Apple II and TRS-80 computers.

Society for Visual Education ★
The Singer Company
1345 Diversey Pkwy.

Chicago, IL 60614 312/525-1500

Produces computer literacy and other film/software packages. Distributes Micro-Ed, Edu-Ware, Scott, Foresman and Co.,

Microphys, BLS, Micro Learningware, Interpretive Education, COMPress and Micro Power & Light Co. software, among others.

Sunburst Communications 39 Washington Ave. Pleasantville, NY 10570 800/431-1934

Distributes MECC software and produces math and language arts software.

Terrapin, Inc. 380 Green St. Cambridge, MA 02139 617/492-8816

Produces Logo software and a turtle robot. Distributes books about the Logo language and the application of computers to teaching.

Transnet Corp. 1945 Route 22 Union, NJ 07083 201/688-7812

Distributes Apple, Commodore, Hewlett Packard and DEC computers, Epson printers and other hardware.

Trumble Data/Comm. Co. 530 N. 3rd St. P.O. Box 50790 Jacksonville Beach, FL 32250 904/249-7066

Audiovisual firm distributes hardware and Bell & Howell, Milliken, Data Command, Edu-Ware and Milton Bradley educational software.

Unicom Div. United Camera, Inc. 297 Elmwood Ave. Providence, RI 02907 401/467-5600

Educational computer dealer for the northeast states has four demonstration centers. Carries large range of hardware and software.

Valiant IMC★ 195 Bonhomme St. Hackensack, NJ 07602 800/631-0867

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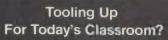
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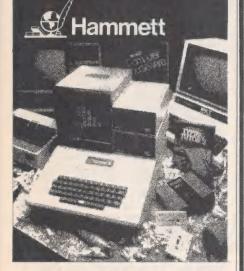


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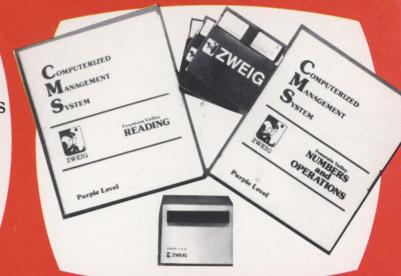
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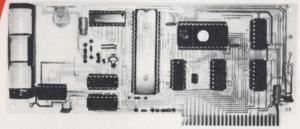
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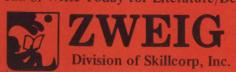
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